×/509.04

TREATISE:

ONTHE

MEDICAL QUALITIES

OF

MERCURY.

IN THREE PARTS.

I. On the natural properties of Mercury, and its operation in the animal economy.

II. On the principal preparations of Mercury.

III. On the medical qualities of Mercury in various difeases.

By N. D. FALCK, M.D.

LONDON:
Sold by B. LAW IN AVE-MARY-LANE,
M.DCC.LXXVI.

PREFACE.

TREATISH

dical qualities of Moreury, which I here of the meLight offer to the world, I hope will be confidered as an improvement to the medical art.

acaded world copy of the first of the first

PREFACE.

real propareitienty that they cover for-

THE following treatife on the medical qualities of Mercury, which I here offer to the world, I hope will be considered as an improvement to the medical art.

The whole is built on experimental facts; and such facts, as have been attended with happy success, even in the most desperate cases. To benefit mankind therefore, by my experience and medical enquiries, has been my sole motive for penning this work.

It has been customary for those who have written on the same subject, to offer some new chemical preparation of mercury, and ascribe to it many wonderful qualities.—It would have been a very easy task for me to have enlarged the catalogue; but, the fact is, I see no occasion for it; those we have already, are more than enough. So very A 2

repulcions

concise I consess myself to be in mercurial preparations, that sive, or at sarthest six, are in my practice sufficient; and I do believe, that those, skilfully applied, will fully suffice in every case where Mercury is necessary.

Nothing reflects more on a man's understanding, or displays his ignorance so muchin medical knowledge, as to be ready to try every pretended nostrum on his patient; without considering the principle on which it acts, and the true state of the disease. It is not the medicine, but the judgment of the application, that restores health.

Throughout the work I have been very sensible of the great torrent of prejudice I had to contend with. I think the very courage to go on, is meritorious; and if I had had the least fear of hurting my reputation or practice, dame Prudence would continually have been at my elbow, and made me lay.

lay down my pon with a trembling thest focusare in my practice sufficiend

and I do believe, that those, skilfully ap-Sometimes, indeed, I have forthed at the approach of Prejudice, beading an enraged multitude, threatening to overwhelm me; but Truth and Philanthropy inspired me with fresh vigour, and premised as my reward, the laurel due to the conqueror of vulgar prejudice and thear is resulted in confidence that per- 38738

ion resident diffs, and the tetle flate of Let me not, however, be underflood to assume a superiority, because I have offered my mite for the public good. -No, I bear too great an esteem for that respectable body of men, to to whom principally I have directed my discourse. I have written in the language of a friend to mankind, with a heart disposed to communicate, and open to the conviction of truth. I despise the man who has no other view in writing, but that of wrangling himself into fame, or of building his reputation

TPREFACE OO

his reputation at the expence of his operation in the animal occoromy.

Lastly, it may not be altogether improper to observe, that I confess some small imperfections of language in this work -a tense attention to matters of importance will divert the mind from trifling objects; - and those, who read for no other purpose than to find fault, will not be disappointed; but those who are more candidly disposed, will, I trust, not only overlook infignificant errors, but gratify my highest ambition, in acknowledging me an useful member of Society. the mercu recipiance may vide Present

18 ce 18 - contrate Mexicult Second St. - 3145

lines of Marcuille follows its Americanic drope , 84-Dr. Weidwichts drope, 8644

Capagol, 375 remining of the invitaginal los

N.D. FALCK.

phificult of Mencury artists on one of the parations, or death, of specific grants of the contract of the cont ting kindelf this James or of but his Rate

nepublishen

CONTENTS

On the natural properties of Mercury, and its operation in the animal economy.

The various denominations of Mercury, 3-its natural properties, ibid. - evident proofs that Mercury is a perfect metal, 8, 9, 10 -its operation in the animal economy, 12-its falivating effect, 30-the pernicious effect of falivation, 40-falivating, with various preparations, considered, 45 -of the good effects of Mercury, if judiciously applied, 52.

PART II.

On the principal preparations of Mercury. Purifying of Mercury, 59-of Æthiops mineral, and other preparations, 64-of Keyfer's dragees, 65-fugared Mercury, 66-Mercurial plaisers and ointment, 67-obfervations on the extract of Saturn, 68of factitious Cinnabar, 69-Turbith mineral, 71-red Precipitate, 72-white Precipitate, 75-calcined Mercury, 76-Misaubin's pills, 78-Mercurius animatus folaris, ib.-Jublimate corrolive Mercury, 80-Dr. Collins's Mercurius folutus, 83 - Maredant's drops, 84-Dr. Ward's white drops, 86-Calomel, 87-remarks on the purity and fophistication of Mercury, and its various preparations, 91-a table of specific gravity, 95.

PART

OONTENTS.OO

On the medical qualities of Mercury in va-

A rational investigation of the causes of diseases 97 enquiry into the animal accommy, 99. -of cutaneous difeates, 109 of inflammation, 121-the different terminations of in-Hammation, 125-of edceration, 148-of internal diseases, 174-of fevers, 180-the nature and distinction of fevers, 181-of acute and inflammatory fevers, 183-of pituitous and intermittent fevers, 221-of conragious and epidemic fevers, 1284 of chronic distempers, 239—enquiry into the various kinds of chronic diffempers, il. -the grand division of chronic distempers into acrid and leucophlegmatic, 243-observations on the gout and rheumatifm, from and gravel, 246 -cutaneous eruptions, 248-frumous complaints, 250-intermittent fevers, 253-ef the fourvy, 256-of dropfical complaints, 273 morbus pedicularis, 317-conclusive obfervation, 327 furtimate contains Myreary, 26-179. Col-

line's Mercurius foluties, 83 -- Maredant's drops. 84-Dr. Wind's white drops. 8 90-Calomil, 37-remarks on the partitional for phillioning of Alerence, and the bankon decparations, 91-a table of focilloty for fig.

PAKT

TREATISE

ATMETERS

ON THE

MEDICAL QUALITIE

STREET OF CONTROL IN THE STREET

MERCUR

it, of all the notical productions Port A re Bling and added

On the natural Properties of Mercury, and its Operation in the animal Oeconomy.

T AM entering, with diffidence, on a subject, which, to treat as it deserves, is, I must own, a very difficult task; as well in regard to the nature and qualities of mercury, as to the manner of its operation in the animal occonomy. But nevertheless I hope to offer, in the course of this enquiry, some hints which may elucidate the many beneficial virtues that lie concealed in this exalted and universal medicine.

nibros

Alleh Ie, end gened Bat, reputation

I shall not spend mine, or the reader's time, in searching into the origin of this production, or its first use in medicine; authors do not agree on this head*; and indeed, in regard to its benefit, such knowledge can be of little advantage. Certain it is, that, of all the natural productions, nothing has baffled more the speculations of men, nothing proved more beneficial, and nothing has been more abused than this important drug.

But, in order to come to its medicinal qualities, we will first trace it ac-

^{*} Mercury was known by Aristotle, under the name of molten silver, appuses xutos; who recommends it intermixed with spittle for cutaneous disorders. Galen enumerates it amongst his deleterious drugs. But James Berengarius, a prosessor of physic and surgery at Ticini, first ventured to use it almost in all diseases, and gained by it not only reputation, but immense wealth; and therefore by some is stiled the first practitioner who discovered the use of mercury; but unjustly; for long before him, Pope John XXI. of Rome, as early as 1279, had used it with great success, in his former physical practice, and gained great reputation by it.

QUALITIES OF MERCURY.

cording to its natural and fingular properties. Mercury is known by various denominations, as fluidum ficcum, from its being a dry liquid; hydrargyrum, from its resemblance to water and filver; argentum vivum, or quickfilver; and Proteus, from the variety of forms it is liable to undergo.

Mercury is of a filver white; a volatile, fluid, and opake metal; and, next to gold and platina, the heaviest of any substances yet known. It has been a question among philosophers, whether mercury could be reckoned a metal? Boerhaave and others thought it could not; for my own part, I think it has all the properties of a metal in every particular.

Its colour and ponderosity are indisputably peculiar to metals; and, as to its fluidity and volatility, these we shall find, on mature consideration, to be but comparative to the B 2 other

ON THE MEDICAL

other metals; fince all metals have volatility in common, when exposed to a due proportion of heat beyond what is requisite to keep them in fusion; even gold not excepted.

All metals may be brought to a state of studity, by fusion; and all again will become somewhat volatile, by the increase of that heat which rendered them so.

Mercury will be consolidated by a due degree of cold; this experiment, however, is not for our climate, but has been experienced in Russia, to a degree of malleability *. We, however, know the small share of warmth that will render it volatile.

Tin and lead, next to this metal, require the least fire to keep them in fusion, so as to be similar to the natu-

This experiment was performed to ocular demonstration by the ingenious Mr. A. B. Branius, of the imperial academy of sciences at Petersburg, in December 1759.

ral state of mercury; and experience. shews us, that lead in that state becomes fomewhat volatile; nay, it may with a simple process be rendered perfectly fo.

Copper, filver, gold, and iron, require each a different degree of heat to bring them into fusion; but it is well known that their loss in the fire is not in the same proportion to each other. Whatever is lost must of course become volatile. Fine filver will stand the fire longer than copper, brass, or iron; and gold, which melts easier than all these, will bear the fire longer than any; yet it is not capable of standing the focus of a burning glass.

Here then we see, that in these particulars, mercury is truly metallic; and that its fluidity and volatility, are only comparatively the diftinguished characteristics of it; being B 3 only

only subject to be sooner reduced than all other perfect metals.

The alchymical adepts, have long dreamt of a peculiar mercury, contained in all metals; and that gold could be nothing but this spirit, confolidated by some peculiar sulphur, produced by the chimerical Philosophers Stone. But though this notion is now in little esteem, yet there are a set of men in every profession, who despise the simple truths of nature, and pursue only what appears mysterious and obscure; thus they become learned philosophers and profound in every knowledge, except that of simple truth and reason.

When we consider the different affinities and oppositions of metals in general amongst themselves, we shall find, that mercury in this respect, has nothing characteristically foreign to every other metal. Gold will unite with copper, brass, and silver,

QUALITIES OF MERCURY. 7

and lose nothing of its maleability; if, however, it is combined with the least particle of lead, (though they are both feparately foft) this noble metal will then lose its splender and ductility, and become a dull brittle mass. Gold united with iron will alter its appearance, and make the hardest and firmest of all compound metals. Copper, filver, and other metals will have peculiar affinities with each other, and produce effects, when combined, which neither have when feparate. Mercury unites easiest with gold, and next with lead; and each will be totally diffolved in it. It combines less freely with filver, copper, or brafs; but not at all with iron, unless by the help of a peculiar art.

Thus mercury in its simple state, may justly be deemed a metal, which has that peculiarity, that it requires a temperate warmth only, to bring it into fusion, and little more to make

B 4

it volatile; whilst all the rest, in order to bring them into a state like mercury, require a much stronger degree of heat than the former; but each in a different degree from the other.

A piece of block-tin immersed in a crucible of melted lead, and another in quick-silver, will dissolve exactly alike; except, that as the heat of the latter is insufficient to melt the tin, the operation must be performed by solution; whilst that of the former is facilitated by the additional heat of the melted lead.

Hence it is plain, that mercury is known to us in a state of surfion; and it must be evident that when this heat is augmented, itmust rarify its particles, and make them sly off: Hence also it follows, that in consequence of this, mercury will suffer the greatest devisibility of particles of all other metals.

If we view mercury in its state of corrofion, folution, and calcination, we shall find that its metalic qualities hold good in that respect also, in proportion with the rest of other metals. Iron, lead, copper and brafs, are easily corroded, even by the air, and almost any humidity that has a tendency to acid. Silver however is much more resisting in that respect; and gold the firmest of all: but a mineral acid however; will attack and corrode them all; for this is the universal menstruum for dissolving all metals whatever; yet acting differently on each in particular. nitrous acid will dissolve all; but gold refifts this menstruum the longest *; except it receives the ad-

B 5

^{*} From the erroneous supposition that bare spirit of nitre, or aqua fortis, will not act upon gold, much of that metal has been lost in the separation of it from silver, amongst artiscers. So far however the observation is just, that the purer the gold, the more it resists the operation of bare spirit of nitre; but as gold is seldom without alloy, it becomes more or less subject to be operated upon by that menstruum.

dition of a marine acid; when then that metal will dissolve as easy as the Again; if some of the various folutions are added together, the one will frequently precipitate the other; in which respect mercury is acted upon in common with the rest. Mercury, added to a folution of gold, will precipitate the gold in the form of a red dusky powder; and iron or lead will do the fame. If mercury is dissolved in aqua fortis, and lead added to the folution, the effect will be fimilar to the former: the mercury will precipitate in a greyish powder; which is in quality, equal to the white precipitate.

In regard to the calcination of mercury per se, this was long supposed impracticable, on account of its volatility; but experience has convinced us, that if the heat is increased gradually, and continued for any length of time, that this operation

QUALITIES OF MERCURY. II ration will succeed with this metal, as well as with all others *.

All these similar circumstances, and many more that might be mentioned, if it were needful, are not merely for the sake of proving that mercury is a metal; for this in general is now taken for granted; but I would only endeavour to strike out a similarity of metals, in order to search into some principles of this important production, which seems hitherto not to have been touched on by medical writers.

In the first place then, the peculiar characteristic of mercury, different from all other metals, consists in this, that it is rendered fusible in a degree of warmth, greatly beneath that, which is requisite to the animal existence; whilst all the rest

B 6

If mercury calcined per se be intermixed with charcoal, and exposed to a gentle heat, the mercury will resume its slaid and vivid state again.

could not be rendered so, with less heat, than would destroy, not only life, but the animal substances themselves.

From this principle we shall be able to account, in a very simple manner, for various effects of crude mercury in the animal œconomy. First, fince this metal, in its natural state, circulates in the fanguineous mafs, in a state of fusion, (if I may be allowed the phrase) it must follow, as a consequence, that its particles as cohering loofely, must be subject to be divided ad infinitum, and be introduced into, not only the most minute ramifications of the circulating canals, but perhaps be forced into the very stamina of the solids themselves. In like manner, it may eafily be deduced, that whilft the animal heat is fuperior to the gentle warmth, which keeps this metal in fusion, it must naturally follow also, that it becomes rarified, into a state of ebullition,

QUALITIES OF MERCURY. 13 tion, and consequently evaporate from every pore of the mercurial impregnated patient.

Secondly, next to gold and platina, mercury is the heaviest metal.

This property has given birth to many very unlearned arguments, by men very learned; namely, that its power and effects in the animal œconomy should proceed from its specific gravity and its momentum in the sanguineous mass; from whence it has been supposed to triturate, as it were, the globules of the blood, and reduce them into a ferous folution; in which some have spoken indeed mathematically, but more curious than just. In cases where it has been given to the quantity of a pound or two, in order to bore a paffage through the intestines, such an affertion might have some propriety, asits ponderosity, together with its accumulating nature, might, act from

from a principle of gravity; but where it becomes uniformly divided in the mass of blood, an argument of that nature must be repugnant to reason and experience.

For, in the first place, the circulation of the fluids depends entirely on the mechanical actions of the canals that convey them; by which the circulating fluids afcend and defcend with equal celerity, independent of the specific gravity, or any addition that can be made to them. Secondly, the mixture of the fluidi depends not upon mechanical causes, as to their combination, but on a chemical principle, that of folution; by which they become united perfectly into one. Hence gold, which is the most ponderous of all metals, may become intimately connected with the lightest of all sluids, æther*; in which this metal may be

^{*} If to a folution of gold in aqua regalis be poured vitriolic ather, the gold, which is univerfal-

fo equally and uniformly suspended and divided, that each drop of the sluid will have an equal proportion of the gold dissolved and suspended in the whole.

Similar to this, the mercury must uniformly be divided and suspended in the whole mass of blood, when it operates in the animal œconomy.

Now suppose a quantity, as for instance, one ounce of mercury, should be introduced into the whole quantity of fluids in the human body, (which is about forty, fifty, or sometimes an hundred pounds weight;) what propriety is there in supposing, that an ounce more or less in this quantity, should have such effects in the animal

ly suspended in the aqua regalis, will immediately leave that menstruum, and unite in the æther, which it will tinge of a beautiful yellow; and the æther separating itself from the menstruum, will attain an additional ponderosity in proportion to the gold it has imbibed.

fabric,

fabric, proceeding from its specific gravity?

But beyond all this, we experience that the effects of mercury, depend not so much on the quantity, as on the different preparations thereof. If the æthiops mineral is truly prepared, we see that it does not affect the falivary glands, from its combination with the fulphur; we fee also, that friction even to a considerable quantity of the blue ointment, will not be nearly fo effectual as a few grains, or the like quantity of the turpith mineral, or what is yet more powerful, corrosive mercury; which will make more tumult, and fooner occasion a salivation, than the crude will, by far.

Here therefore the theory of the effect of the mercury, built on its specific gravity, or its additional momentum in the blood, must fall to the ground.

As

As I would ever wish that my principles may furvive my existence, I hope not to be so far led aftray by ambition, as to grasp for fame at the expence of integrity. Whenever I speculate on the surprising qualities of mercury and its wonderful effects in the animal œconomy, I am bewildered as in a labyrinth of amazement; and though its furprizing effects are obvious to my fenses, yet the causes of them, I must confess, are not at all times fully evident to my comprehension. notwithstanding, I boldly offer my sentiments; and though I despair of ever arriving to an absolute certainty of its medical quality, I hope at least to be fortunate enough to lay a permanent foundation, in order to difcover its many falutary effects in the healing art.

The first question which I could wish truly to solve, is whether mercury circulates in our fluids in a metallic

tallic state, in its solution, or in what form it acts upon the falivary glands? If a piece of gold is held in the hand, rubbed on the skin, or kept in the pocket of a patient, impregnated with mercury; either by friction, fumigation, or internal uses, it will immediately turn white and become impregnated with quick-filver. But this does not prove the mercury circulating in its metallic state; sublimate, and other preparations applied to gold, will do the same. But then again, sublimate, or fuch a mercurial preparation, does not become volatile, but by a strong heat. Secondly, a patient in a state of falivation will turn a piece of gold white in his mouth; though the faliva voided, was never found to contain any mercury on a chemical ana-And lastly, it is obvious from experience, that it will act upon the system more powerfully with an equal number of grains in its faline

QUALITIES OF MERCURY. 19 State, than it will in somany drachms, or perhaps ounces in its crude.

For my own part, I am apt to think, it may circulate in the fluids, in its metallic state, as well as being absolutely dissolved in the mass of blood; but that its operations in regard to its effects on difeases, and on the fallvary glands, must depend upon the latter: moreover, that it must undergo various changes before it acts in that respect; for experience shews us, that whether the unction is rubbed on the shins, arms, or about the tonfils, &c. the falivating effect is brought on, nearly in an equal space of time. And again, whilst all the various preparations of mercury (except that combined with fulphur) has the same effect on the falivary glands, only in a different degree, proportioned to their faline acrimony, it follows that they all must again undergo a different solution; and as it were be affimilated

to one and the same kind of solution, in order to have one and the same effect.

The next question I would ask is, by what power, or quality mercury acts in the animal economy? Here arise yet more difficulties to furmount, than in the preceding; those who have rejected its effect from a specific gravity, have substituted in its place, a septic quality, on the fluids; and this, according to their argument, is evident from the fætor in the faliva, and the fætid exulcerations in the mouth, which falivation. produces. But this argument feems to me equally lame with the former; for, was that the foundation of the fpitting operation, the whole animal fystem would undoubtedly share the fame fate, in proportion with the falivary glands; as is the case in an, inveterate scurvy: But partly from this notion, and partly from the imprudent use of mercury, in the scur-

oy, it has been condemned as highly injurious; though in fact it is (if judiciously administered) of singular service; particularly, with the addition of proper antiseptics. Let us therefore enquire for other causes.

We will take it first for granted, that mercury, in whatever form it is administered, acts upon the solids as well as the fluids; but, from what we have before considered, there must appear a wide distinction in the operation, according to the form in which it is introduced, and the quantity.

Good and bad effects depend entirely on the uses which we make of such things as are productive of either. When we enumerate the benefits of fire and water, let us also remember, that we may be burned by the one, or drowned by the other. So likewise the most efficacious medicine is the most deleterious poison, if injudiciously

diciously applied. And that we may the better discover wherein the virtues of mercury consist, I hope it will not be improper to strike a contrast to its good qualities, with the mortal effects of it when used to excess.

I shall first begin with it in its crude state. Mercury is known to be an anthelminthic; now an anthelminthic is any thing that will destroy worms and animalculous vermin; that is to fay, it will destroy life in minute animals, without producing the same effect on the greater; hence it must follow, that its virtues are owing to the proportion only. Now the only method of judging of its destructive effects on the lives of animalcula, is by feeing how it destroys the human species, when injudiciously, or per chance, it is introduced in the animal system in an over-proportionate quantity.

QUALITIES OF MERCURY. 23

Mercury is procured at the expence of the lives of many. The unfortunate people, who either are condemned, or hired to work in the mercurial mines, become foon impregnated with mercury from the perpetual evaporation of it in the mines, and die shortly in a very mi-ferable manner. Their first fymptoms are a full though flight fever, with a dull head-ach; then they grow enervated, feeble, paralytic, and falivation enfues; the head fwells; the mouth becomes putrid; the teeth fall out; a terrible pain in the bones; and an epilepfy and death closes the whole scene of their misery. Gilders, who are exposed more or less to the fumes of mercury, frequently fall a facrifice to the same disorders; particularly, the palfy, an universal debility, and often an untimely death *.

Thefe

matric temporarismoso estado

Dr. Lewis, in his Philosophical Commerce of Arts, p. 88, has described a very ingenious furnace,

These terrible effects have been obferved to proceed from the fumes, oftener than from any other method of impregnation of mercury in the fystem; but, what is very extraordinary, is, that fuch shocking effects should purposely be brought on and applied in the healing art! Let us, however, examine into the nature of those effects.

It has long been a question in physic, why fumigation should be more subject to occasion a palfy, than a greater quantity of mercury by anointing? My opinion is this; according to the above principle, mercury is always in fusion in its crude state; it follows, therefore. that fuch an additional heat as will reduce it to fumes and make it fly off, must at the same time reduce

nace, that will not only prevent the workmen from being exposed to the deleterious fumes of the mercury in gilding, but fave much of the mercury, which otherwise is lost in that operation.

the volatile particles partly to a fcoria; fo that those particles which enter the pores of the body are partly the melted metal, and partly scoria. If the melted, or truly metallic parts become triturated in the circulation. fo as to be minutely divided, that they may fuffer a folution, that part will undoubtedly bring on a falivation; but the fcoria, or the inactive particles incapable of being diffolyed by the animal fluid, being introduced with the active particles into the very stamina of the solids; remain, in the delicate tubuli not only vellicating them, but damping the tone and irritability of the nerves, and thus enervate the fystem; thence produce palfies, and all the other evils of fumigation, mentioned before.

This hypothesis I apply also to the miners and workers in lead.

Lead is the most inactive of all metals; next to mercury it is easier C melted;

melted; and of all metals easiest corroded and calcined. The sumigations of lead have all the paralytic and enervating effects in the nervous system before mentioned, without the attending salivation; from causes, demonstrable with the former.

When lead is in a state of fusion, it evaporates; but whilst the air is too refrigerating to receive the particles of lead in a melted state, the fluid body of the metal keeps in a stronger coherence with itself; (and hence all metals become less volatile than mercury in a fluid state) for which reason, these particles that evaporate from lead, and are fuspended in the air, are principally the scoria of this metal; and if drawn in by respiration, remain inactive in the fystem, and become obnoxious to the animal functions and œconomy. The fame will hold good with paint, from preparations of lead; as the particles of the oil impregnated with lead,

lead, will have the same pernicious effect *. These are the destructive consequences of sumigation, either of mercury or lead separately; but what must we expect to be the consequence when combined together? And yet we have authors, even of a modern date, who recommend sumigations, or frictions, with an amalgama of lead and mercury; Horrible!

But experience shews likewise, that friction with mercury, is liable to occasion the same mischief; and I think, this may be accounted for, from the same chain of causes; for whilst the globules of the mercury are divided by the unctious matter,

C 2

^{*} The drying oil of painters is rendered to by preparations of lead; for it is the evaporation that occasions the drying: consequently the exhaling vapour must be loaded with particles of lead; which prove so universally hurtful to painters. I have, in such cases, advised plenty of olive oil, as absorbing the saturnine particles in the primæ viæ, by which they may in a great measure be prevented from entering the system.

William W

many particles are fo liable to be intimately combined with the oleous particles, as intirely to lofe their metallic nature; or become sheathed, from being acted upon by the animal fluids, and thus together circulate in the fystem, remaining asit were unafsimilated; and hence they are liable to be introduced into the stamina of the folids, particularly thenerves. These become confined, and give birth to the same grievances, as from fumigation; in this, however, there is not so much probability as in the former. But what occasions the most mischief, in regard to the mercurial ointment, is the sophistication of mercury with lead; and when that is the case, those evils must inevitably be the consequence; for the particles of the lead being intimately combined with those of mercury, they cannot fail of being introduced into the whole mass of fluids, and occasion such dreadful havock.

But, to what has been faid, the æthiops mineral may seem an objection; as the mercury in this preparation rendered inactive by the fulphur and yet not attended with fuch pernicious effects. To this I answer, that the particles of mercury inveloped in the fulphur, receive at the fame time from that combination a stimulus whence they are less retained in the fystem, and seldom go beyond the first passages. But if the athiops is sophisticated with lead, it must be equally pernicious with other adulterations; as it is generally given in greater quantities than other preparations of mercury.

Thus I would account for the tremor, palfy and other melancholy
debilities, which are the confequences
of fumigations, or superfluous impregnation of mercury, by whatever method; which we generally
find to be the remaining confequences
after salivation. And though the
patient may by that severe task get

C 3

rid of one great evil, yet those incurable maladies are too frequently introduced in its room, and make the remedy prove worse than the disease.

Before we go farther, let us consider its falivating effects *. This I conceive to be brought about, by that quantity of the mercury, which becomes dissolved in the blood; and which in that effect must be in such redundancy, as to affect the falivary organs by its fedative quality. I own myfelf, however, entirely at a loss to account for this extraordinary effect, with any certainty; nor have I met with any author who has given me fatisfaction on that head. haps, what I am going to fay, may carry probability with it; at least it appears to me to be just, particularly as it does not contradict experience.

^{*} It appears that one Johannes Carpus, an Italian physician, about two centuries ago, was the first who atroduced falivation.

It must be remembered, that I have faid fomewhere in my works *, that the animal automaton, is a composition of glands; in so much that the whole movement, may justly be confidered, as a gland, composed of many finall ones; it must also be remembered, that every gland is an elaboratory of its peculiar humour, depending on its peculiar formation and its own intestine motion; and all glands, like fo many manufacturers or individuals of the animal state, aid each other, but share different proportions in the common fabric: These are the natural glands, and the animal in the found state. But when an acrimony is introduced into the fystem, as for instance, the venereal virus, the irritation is introduced either into particular glands, or spread univerfally; which disturbance not only affects them, but forms glands of its own, spontaneously, wherever this virus meets the least

^{*} In my Treatise on the Venereal Disease, under the head on glandular diseases.

opposition; and hence natural and unnatural glands, will be mixed and blended with each other: and this is the animal occonomy in the diseased state.

Now it must be evident, that the unnatural glands, as being the work of disturbance, chance and irregularity, must have in general a slight foundation; whilst on the other hand, the natural ones, as having their rudiments laid in the first formation, are not to be obliterated, but with more difficulty.

And here I will add, that each glandulous part, whether natural or preternatural, has a felf-preferving animalating power *: by which it draws fuccour from, and contributes to the common stock of the whole sanguineous mass; in which act it

^{*} I have taken the liberty to adopt the term animalation; by which I mean what authors would signify by animal vegetation.

has a life, or rather an animated intestine motion dependant on its own This I think appears formation. evident in all kind of excrescences, or exulcerations, of every denomination whatfoever: where fubstances both of folids and fluids will become generated; form arteries, veins, and other canals, and proceed in their progress as if actuated with life; nay, even sometimes, degenerate into a number of little animals, separated from the substances which gave them existence; as is the case of most cutaneous diseases, but conspicuously fo in the loufy disease; where that vermin will breed on their own accord, and be concealed under the skin, before they bore their way through. If and the war do with the sale

And that such separate, and individual animation of the natural glands are highly requisite for the subsistence of the whole fabric, must appear cyident

- le si solvenil Alavolus is al-

bodrol

evident to every judicious enquirer into the animal state and economy.

Let us now suppose (as it must seem most rational) that the circulated mercury absorbs in its solution or is acted upon by that alkalescent part of the sanguineous mass, which nourishes and heightens the sensation, and gives irritability to the nervous sibres; and we shall at least be in the most likely road, for discovering the cause of the operation of a mercurial falivation.

Experience shews us, that if mercury, is judiciously administered, for cutaneous disorders, it has the desired effect; now as these disorders are the effects of an additional stimulus irritating the nerves, and hence have formed those little glandules, or excrescences, which, as I have said above, having a slight foundation, they are first acted upon by the distibly are first acted upon by the distibly dived mercury in the sanguineous mass; for since the stimulus is absorbed

forbed and most felt in such a weakfounded part, their excretion and animalation, must cease, in proportion as the irritability of their folids become debilitated and lose their power of action.

But where there is not a preternatural acrimony to work upon, the natural stimulus and alkalescency in the blood, must supply the place; and the smaller glands, particularly the lymphatic, will feel the effect. Hence proceeds flaccidity of fibres, and a fensible enervation of the fystem on the use of mercury.

When, however, the quantity of mercury is increased, consequently more must be dissolved, and the effect must extend farther: And as there is no fet of glands, which are more cellular, that is, whose tubulæ are wider, more tender, and capable of containing a greater fecretion from the blood than the salivary,

C 6

they

they are most likely to be worked upon, as the tone of the tender, though wide tubulæ of these salivary ducts must lose its elastic power; hence the faliva accumulates, diftends them wider than ordinary, stagnates the humours, tears the stamina of these debilitated glandulous tubuli, and thus produces an incontinency of saliva, inflammation, exulceration, and confequently an acrimonious stimulus. From these aggravations an additional congestion of humours to those parts, is apt to ensue, besides that brought out from the first enervation of the glands: add to this the natural effort of the other glandulous parts: which in order to recover, and preferve their natural functions, contribute to this accumulation and evacuation.

I am well aware of the many of objections that may be advanced against this hypothesis; a principal

one is, (and I believe has misled many) that chewing aromatics, or other acrid things, will promote a fecretion of the faliva as well as mercury; but that kind of spitting produced by irritation, must, on the least reflexion, appear widely different, in every part we can view it in, from the continual flavering brought on by mercury. For, in the first place, fuch a spitting, or accumulating of faliva, is merely temporary; fecondly, it is from an external irritation; and thirdly, if the irritation is continued, the parts will inflame, and then the fecretion of the faliva will fenfibly diminish, in proportion to the ardency of the inflammation.

Now all these causes, and the proceedings of their effects, are diametrically opposite to those of salivation from mercury. The inflammation and exulceration of the falivary glands, and the neighbouring parts, have also appeared in support of the idea,

idea, that falivation is brought on by a stimulating quality: But this I think is as eafily answered as the the former; for the inflammation, and following exulceration of the falivary glands and the chaps in a falivation by mercury, is materially different from that kind, which proceeds from an acrimonious stimulus of the folids; as a tumefaction from a mercurial falivation, by its hue, fennfibility, and pain, is merely a congestion of accumulated, and flagnated humours; where the vessels contain them, from the weakness of their natural elasticity, or power of action: This is fully confirmed from the flavering faliva, the fucceeding putrid phagedænic ulcers, and the eadaverous fœtor, so characterically peculiar to itself.

Another argument in opposition to this hypothesis may be; why this effect of mercury should not be equally in all the glands, as well as the

the falivary? This indeed is the greatest stumbling-block I here am labouring to remove. As in the scurvy, the putrid falivating and ulcerating effect in the mouth, proceeds from an univerfal debility in the folids, in the whole system, owing to a putrescent acrimony in the mass of blood; fo in this case, the seat of this putrid accumulating evacuation, becomes particular only; owing to a felf-preferving power, in the ani-mal occonomy, to protect the mass of blood and the solids from the contagion: That, together with the congestion from the stimulus in those parts, must continue the evacuation. as long on the one hand, as the debility of the folids from the accumulated humours lasts; and on the other hand, as long as the putrid stimulus of the stagnated humours remains uncorrected.

In regard to the operations argued, in a numerical, or mathematical strain, strain, I think them too trisling, to say any thing to prove their absurdity. I am not wholly ignorant of the important science of mathematics; yet hold it in too great esteem to render its operations ridiculous. There are likewise other arguments, which to me seem equally as insignificant either here to mention or to result.

Let us now see the result of all this; the perniciousness of salivation, and the most benefit we may ever hope from it. As to the first, if salivation is continued and increased, the patient must die as horida death, as in any shocking disease whatever, the confirmed lues not excepted; hard choice this for a poor patient, either to die by the pox or salivation! but if the patient survives,—why then, too often, he had better have died in the spitting operation, than having added to a curable disease, incurable maladies, from an abuse

abuse of the most effectual remedy! A paralytic tremor in the joints, added to athritic flying, and fixed pains, from the remaining and undiffolved particles of mercury and fophisticated addition of lead; a universal debility of the system, from the emaciated flaccidity of the folids; a lentor from an impoverished blood; toothless; stinking breath; fore throat; dim fightedness; defective intellects, &c. &c. added to the lurking remains of the virus, or perhaps the very evil, for which that fevere task was undertaken; which additions of evils must hurry the miferable object to the grave.

But this perhaps is faying too much; I hope it is in general; though much more might be faid of the pernicious practice of falivating in particular. But the above is the fate of one half of those who survive salivation; and the most fortunate of the other half, will ever

carry a certificate about them of an injured constitution.

These are the mischiefs of salivation from the crude mercury. Let us now see the difference of this evacuation, when produced from mercurial preparations. Calomel for that purpose is most customary: This preparation if pure and properly made use of, is perhaps one of the greatest medicines in nature; but like all medicines of great efficacy, precarious, if used to excess, or deficient in its preparation.

The first great and too general defect is in its insufficient sublimation; having too much of the acridness of the corrosive sublimate remaining; from whence it is, not only liable to corrode the stomach and bowels, and lay a foundation for many grievances in the first passage; but perhaps tear the whole constitution to pieces, particu-

QUALITIES OF MERCURY 43 particularly when used to such excess as to salivate.

Secondly, when it is not finely prepared, or sufficiently levigated: This is a circumstance which has not been enough attended to, and even by some supposed of no consequence; but must on the least consideration appear of moment, as experience sufficiently confirms: For the chrystals of calomel, are naturally of a needle-like form; and let it be levigated ever so small, the particles through a microscope, will yet retain their pointed form; and those very points have done more harm, than many have been well aware of.

But the most pernicious of all, and by which thousands have been poisoned, is the abominable sophistication of calomel with white lead, intermixed in levigation of the ready prepared; horrid roguery this, to sacrifice the health and lives of their

OWIL

own species for the fake of a little

There is not a more fure poison, than the preparation of lead internally taken; and I fear it has no antidote. From this diabolical adulteration many grievances have arisen; vomiting, a gnawing tormina, a contracted pain in the bowels, added to a painful and paralytic wasting of the whole body, and a pining away into death itself.

But besides all this, calomel as well as the crude mercury, (though it should be pure, and prepared as it ought) when given in so great a quantity as to continue a deep falivation, the fibres of the minute part of the fystem will become debilitated; and not capable of dissolving the whole, or expel the recrement that may remain in the system, confine these particles in the minute tubuli eethe health and aver of their

fome it might feam need

Amongst the ingenious men in mischief, we have had some, who, as a specimen of their penetration, have cried up the fallvating by red precipitate, and by a ridiculous improvement of burning it off in spirit of wine *: They had better have chosen gunpowder; for neither spirits of wine, nor water has any action upon it, to make it either better or worfe. That medicine, is a most excellent one for external uses; but it is an absolute caustic internally. This way of quick dispatch, so destructive to the race of men, began once to come in fashion. 'Tis true, dead men tell no tales; however, the too sudden operation happily put a stop to it; and now few quacks kill patients that way; they having found out a flower and more lucrative method of doing ithin hanha figerd

-0519 W The carolline mercury.

Next

Next we will confider the falivating with corrofive fublimate; to some it might seem needless to say any thing here of the impropriety of that method; yet there is too much necessity in this, as well as the former, to point out its abuse. It is, however, eafily supposed, what mischief such a preparation as corrosive mercury may do, when given fufficiently to falivate; for though it is not subject to let any undissolved particles remain in the system, yet from its correfive faline nature, it is apt to occasion so great an inflammation in the stomach, bowels, and the whole fystem, as is shocking to think of. But who should suppose that there are chemical medicasters diabolical enough to sophisticate this preparation with arlenic and led! But it is as true as it is horrible! It is needless to enlarge on the execrableness of this villany: Every breast endued with the least humanity must shudder at such iniquitous practices.

Thefe

These preparations, as they are the most important, and as I shall fay more of their beneficial effects, I thought proper first to point out their abuses. As for the many other, fome pernicious at any rate, and some more curious than useful or fafe, I throw them out of my catalogue here, as meer infignificant noftrums, that have at least nothing in preference to those mentioned; yet, as far as they are introduced into general practice I shall give them a slight review. However all mercurials, if ever fo good, must of course become pernicious, when used to such excess as to falivate. . Shit not bonion en

It now remains, to point out the good qualities of falivation: But for those we seek in vain. One in a hundred that perchance has been supposed cured by falivation, owes very little thanks indeed to that pernicious evacuation; for the continual drain of the humour and congestion

gestion to those falivary glands, as are at least able to resist the influx. must prevent the dissolved mercury from penetrating into the more minute and remote parts, where it ought to be introduced; and therefore reason corroborates with experience, that the stronger the salivation is kept up, the less good we must ever hope from it. I infift upon it, if any benefit at all refults from this operation, it is effected in the intermissions of the spitting only. Butnine out of ten are murdered; and of the remaining number that furvive this severe touchstone, nine out of ten are ruined for life.

- But the advocates for falivation, whose interest it may be to keep up the notion, (for none can with candour defend it, either from reason or experience) may perfift in the only remaining plaufible fubterfuge, namely, the evacuation and expelling the malignity of the body by spitting, as restion

a con-

QUALITIES OF MERCURY.

a continual drain of humours. That the weak and diffident may not longer be deluded by the fo very abfurd notion of salivation; and that I may not be condemned as an unfair arguer, supporting only my own doctrine, let us suppose that a continual drain of humours is actually the case; and what then? Why then, the whole amount will even, as before, coincide with fad experience, moreous families and

In the first place it is in the circulation of fluids, and in the most minute parts of our body, that our health depends; and in the universal infection, it is even into those minute tubuli, which are not to be traced by the best microscope, that the virus infinuates itself; confequently becomes connected and ingrafted in the stamina of those most minute capillary tubuli of the fibres that compose the folids.

from the gring of the land from

cinere

191 Let I beg Heave do ablerve, that

Let us now fee what spitting will do; which is a continuation of a thin spontaneous slaver, drained from the whole mass of blood, promiscuoufly; equally disagreeable, and attended with a putrid fætor, whether the patient was previously well or ill. Now as from this evacuation the influx of the blood is hindered from entering into those minute parts of the animal economy, confequently, there must be a hindrance to the exchange of humours. There will indeed be a drain, and this will diminish the whole system; but for this very reason too, the virus will only be thut up, and kept from being acted upon; and therefore, when the falivation is at an end, one time or other the evil will be renewed, as experience confirms.

Admit, however, there is a circulation continued, and a drain from the minute parts; I would then beg leave to observe, that there there are parts of our system where there is not a rotation of sluids in many months, or perhaps years; whilst in other parts, the sluids are exchanged with every pulsation. If this was properly attended to, no one could be weak enough to suppose, that salivation, or any other desperate remedy for the space of a month or six weeks, would be sufficient to search into those minute parts; particularly in the bones, where the virus is generally most pernicious.

I could say much more on the pernicious effects of salivation, and the impropriety of this evacuation in a curative indication; but I fear I have been too tedious, for the judicious already; and whatever might farther be said, either by me, or any one else, though ever so striking, would, I know, be equally vain to the obstinate. I therefore refer the disputants to the experienced unfortunates, the living witnesses of the truth of D 2

my affertions. We will therefore return to the beneficial qualities, and the prudent use of this greatest of all medicines, MERCURY.

There is no temperament, conftitution, fex, or period of life, exempt from receiving benefit from mercury and its preparations; and I don't know a disease incident to mankind, where it can with propriety be deemed improper; unless used to excess, and disproportioned to circumstances. The truth of this I have experienced with fuccess both by internal and external applications; not only in the venereal, but inflammatary and chronic distempers. And I am convinced, that many judicious practitioners must agree with me, particularly when they have studiously avoided its effect on the falivary glands; which must ever be carefully attended to, by every one, who has the benefit of the patient at heart.

The hypothesis which I have advanced concerning the effects of mercury in the animal economy, I mean not to inforce on the judicious reader, farther than may be confistent with true philosophy; if I have erred from this, I wish my judgment may be rectified; and shall be grateful to any one who will do it with candour. But the more I reflect on the principles I have formed to myself, of the effects of this medicine in the animal economy, the more I am confirmed, that mercury acts principally from an antacrid and fedative quality; and that its stimulus is merely accidental, or from the folution it undergoes, particularly in its crude state; but in the preparations, it may acquire a stimulus from the faline combinations, or from its divisibility of particles. This is one reason added to the various others given before, why I prefer preparations to the crude, particularly for internal uses. But another still D 3 ftronger.

stronger is, that the effect of mercury is greatly augmented by faline combinations; whereby it becomes disunited in its particles, so as to be the easier dissolved in the mass of blood*.

* Practitioners have ever differed in fentiments in this respect; Dr. Astruc, however, was so great an advocate for crude mercury (who to a hair's breadth knew how nicely the globules of the mercury would grind the blood to atoms by its specific gravity) that he feems to be enraged with the chymists for their needless preparations, "why do they (fays he) " needlefsly torture the particles of mercury by folu-"tion, calcination, precipitation, sublimation, in or-"der to deprive them of their native form, upon " which the whole force of the remedy depends, and " is the particular, not to fay the only cause of their " effect." But Dr. Astruc was in this, as well as in many other particulars, hurried away by an overflowing of felf-fufficiency, gloffed over with artificial reasoning, by which he, under the specious appearance of profound learning; has, like a too fuccessful ignus fatuus, made horrible work in practice.

The many instances we have of mercury in its sluid and metallic state, having been found in the very carious bones, and other evils taken from the victims that have perished secundum artem, under the various method of salivation, sumigation, &c. according to Dr. Astruc's prescriptions, I confess has put me entirely out of conceit with his doctrine; and there are passages of his chirurgical treatment, which

QUALITIES OF MERCURY.

For that method where the least will suffice, must always be preferred.

Icheel an inches Before I proceed to particulars in the preparations, I shall make one observation, which did not occur to me, where it might have been better introduced; and that is, that mercury has frequently effected other evacuations than those which were intended. Thus, a quantity of mercury defigned for falivating, has fometimes gone off by sweat, urine, or purging *. In these cases, (which though but feldom) it has been experienced, that if the operation has

which I declare, have filled me with astonishment and horror.

Peace to his shade, and oblivion to his doctrine!

* I remember a gentleman labouring under a confirmed lues venerea, who might be faid to be mercury proof with respect to falivation; but after he had been given up for incurable, because no other evacuation could be brought on than a diarrhæa; I was so fortunate as to prove the contrary by a gentler method; to the no small surprize of those who had condemned him for loft.

D 4 afted

acted violently, a lameness of the acting part has been the remaining consequence. Hence an incontinency of urine, colliquative sweats, cachexies, dropsies, habitual diarrhoeas, &c. succeed, from those forced and continued vacuations; not mentioning the frequent and sudden deaths from the mercurial tormina and dysenteries.

Whenever a ptyalism, or salivation appears, we know that if any other evacuation takes place, the spitting naturally subsides, whether accidental or produced by art; this is most evident by giving cathartics, when spitting is brought on against our inclination. But whatever methods are used on these occasions, the body too often becomes emaciated; and it should be strictly observed, the less we are compelled to transport those drastic drains, so that the mercury may be circulated in the blood, without disturbance to the constitution, or the system, the

QUALITIES OF MERCURY.

more may we assure ourselves of good success; and that these particles will be introduced gradually into the minute ramifications, where the benefit is most requisite. This must be absolutely done, without a congestion to particular parts; otherwise the whole operation is disturbed.

patient to bad Before I conclude this part, I must not forget an observation of the greatest importance with respect to the use of mercury in general, whetheradministered externally, but more especially internally; and that is, ever to preferve a temperate warmth of the body, so as to promote a free circulation of the fluids, and a gentle perspiration. For in that state, the circulating tubuli in the ramificating stamina are open to admit of a free fecretion and excretion of the fluids, and the tone of the folids are by this temperate warmth preserved in a proper state, to execute the animal function. But on the contrary,

D 5

if the body, under the medical treatment of mercury, is in a cold or chilly state, not only the mercury is prevented by the constriction of the finall tubuli to enter the minute part of the system, but even the mercurial particles already introduced are liable to be shut up, and subject the patient to bad effects. Summer therefore is preferable to winter; warmer climates superior to the cold; but above all, from which neither climate or feafon are excluded, taking of small doses at bedtime, and the patient kept warm in bed, should always be observed as the principal object towards a successful treatment with mercurial medicines.

Thus I hope I have given satisfaction on the operation of mercury in the animal occonomy. But, that we may be the more particular of its benefits, we will next proceed to its various preparations.

PARTIL

On the principal Preparations of Mercury.

I AVING thus considered the nature of mercury, and its good and bad effects in the animal economy, we will now proceed to its various principal preparations, as it is made fit for use in medicine.

First then we will observe something concerning its purity in a crudestate, as that is of the greatest consequence in every other preparation.

PURIFYING OF CRUDE MERCURY.

Mercury is found in the mines, either in its fluid state, called virgin mercury; or else it is distilled from the ore, which has various appearances:

ances; but that ore which yields the greatest quantity, is the native cinnabar *; as those natural mixtures are generally effected by sulphur, the process of separation, in order to disengage the mercury from the sulphur (which prevents it from rising) is by adding alkaline earths and the scoria of iron, which attract the sulphur more than the mercury; then leaves it at liberty to separate, to rise in sumes, and be drawn off.

Mercury is too generally sophisticated with lead, with which it very readily unites; and this adulteration is the more effectual, when bismuth is added to the fraud; from which the amalgama preserves greatly its

^{*} The native cinnabar has been by some highly extolled as a medicine; but as it is very apt to be combined with other substances, and rarely sound as pure, as the factitious when duly prepared, it ought never to be risqued in medicine: For though it sometimes excels in colour, yet the factitious may always be depended upon on account of its composition; provided its preparation is faithful.

fluid state and its silver brightness. Hence the external appearance, is not always a true criterion of its purity, nor is the pressing it through shammy leather a sufficient purification; for the mixture is sometimes so artfully united, that there will no paste amalgama remain, though perhaps one fourth may be lead and bismuth.

Distillation therefore is the only purification to be depended on. This is best performed in an alembic of iron; the only metal that withstands the penetration of mercury, and is less liable to break than glass; as the mercury is apt to detonate in the operation. A gun barrel is very convenient for the pipe. The higher the mercury can be made to rife, before the pipe bends downwards the better; fince thereby the particles of lead may the more be prevented from rifing: and to condenfe the fumes of the mercury more effectually, bluowal

the lower end of the pipe should be an inch or two immersed in vinegar, by which not only the mercury may be gathered without loss, or danger to the operator; but as it distils, will, by the vinegar, be purified, from any of the leaden particles that should happen to rise *.

This method differs somewhates from that generally given; but the advantage must appear to every judicious reader. The apparatus is merely trifling with regard to the expence; an iron pot, with a cover, in which a gun barrel may be fixed by a common blacksmith, and will last for many years.

I would

^{*} This constitutes one of the principal characteristics of mercury, wherein it distinguishes itself from lead, as well in its crude state, as in its various undissolving preparations; for the vegetable acid, which is a dissolving menstruum for lead, will not act upon the mercury, unless with the addition of salts; when it then begins to act on mercury, though but slowly.

I would here farther observe, that as the adulteration of lead with mercury is of the greatest consequence, particularly for internal uses, no practitioner, who has the welfare of his patients at heart, should trust to it, unless purified under his own inspection, or such as he can confide in; particularly as the operation is fo very eafy. It has been afferted, that the adulteration of mercury with lead or bismuth could have no effect on preparations by fublimation; this however is a very gross mistake; for though the greatest part of the recrements of the lead may be left at the bottom, yet many particles will rise; the evil consequences of which I have already pointed out.

Having thus purified mercury, we will now consider some of the principal preparations thereof.

it was intended to deliro

I would here farther obterver

OF ÆTHIOPS MINERAL, AND OTHER PREPARATIONS.

parricularly for sincernal luces Æthiops mineral is formed by triturating an equal part of purified mercury and flour of fulphur in a glass or marble mortar, till they are united, and no globules of the mercury appear. To make this preparation effectual, it should be in hand fome time, and at every interval of trituration, the mortar should be gently shaken; by which the globules will accumulate at the bottom, and the operation by that means be performed with more certainty. This medicine has been long fince given to children as an anthelminthic; and so in fact it is; but partly from reasons before mentioned relative to crude mercury, and from the frequent adulterations with lead, it has often proved destructive to those innocent victims, together with the worms it was intended to destroy. By

By others, it has been supposed of no effect, because it has not salivated; but this error might easily be remedied, if we considered that sulphur is in itself a stimulus, to promote other secretions, which the mercury sollows: And probably, the sulphur prevents its being acted upon by the blood, as powerful as other preparations*.

The trituration of mercury per se, has been much celebrated as a grand nostrum; Keyser's Dragees or Sugarplumb pills, after a most tedious trituration of the mercury with water, and then with vinegar, &c. &c. turns out at last nothing but mercury mixed with a sufficiency of manna, and made into little cakes; which might be done out of hand

To the mercurial glebs found in the mines, are added alkaline earths and the scorie of iron, in order to disengage it from its sulphurous particles; quære, whether the æthiops mineral, with an addition of a chalybeated medicine, would not have an equivalent effect in the animal economy?

at once, as well as with this so very tedious process: and after all, this great quack-specific has, in my opinion, nothing superior to the various other preparations for internal uses of mercury previously mixed with balfam of sulphur, turpentine, gum amoniac, honey, or sugar *, &c. they are all of one nature; I don't like any of them.

* Sugared mercury is prepared of half an ounce of mercury and of fugar; with distilled oil of juniper twelve drops. The whole is well rubbed and incorporated in a glass mortar. This medicine certainly is a powerful antheiminthic for children; the dose is from four to ten grains; the alkalisated mercury is of the same nature with the foregoing. It is prepared of quickfilver purified three drachms; prepared crabs eyes five drachms. The whole intimately triturated till the globules of mercury intirely disappear. This has been celebrated, befides its mercurial quality, as a great corrector of the acidity in the prima via by the absorbent quality of crabs eyes. But, the dose of this preparation being only from two, four, to twenty grains, the absorbent quality can have but little efficacy. Others have endeavoured to amend this medicine by intermixing the whole with the white of an egg; all the benefit I fee in this improvement is, that the mercury is prevented from separating from the crabs

FOR EXTERNAL uses we have the mercurial plaisters and ointments. The simplest of those, are undoubtedly the best, provided they are truly intermixed. The balfam of fulphur, or turpentine ordered in the Difpenfatory, appears to me rather to be an obstruction to the efficacy intended; as the particles of the mercury become too much sheathed from being acted upon by the fluids, or being absorbing of the mercury by the pores of the skin. The plaister made of twice the quantity of common diachylon to that of mercury, I hold to be the best. The same proportion I also advise for the ointment; but nothing besides hog's lard and mercury; to which occasionally a little camphire may be added.

eyes, which it certainly will without that cement. Sometime ago we had an ingenious method proposed to us of triturating mercury per fe, namely, to tie a phial of mercury to a coach wheel, fo that whilf the coach rattled along, the mercury might be trituwere the cates where inceleines impared bater

prepa-

istal mercury are bearings and where other Though

Though lead is a most pernicious and flow poison administered internally, yet it has the most powerful and falutary effects in external uses, as an antacrid and sedative*; whence it is an incomparable antiphlogistic, particularly in erysipelatic inflammations; and it is a great corrector of acrimony in most malignant ulcers. On this account, the fimple diachylon is the best of all plaisters I know of. And other preparations of lead in many external cases are perhaps as powerful as mercury itself, and particularly the extract of Saturn +.

There are cases where medicines prepared with crude mercury are beneficial, and where other prepa-

^{*} The world is indebted to Mr. Goulard for having written so warmly on the many virtues of the extract of Saturn. But in his zeal, he goes much too far, when he recommends it internally; for though a slow, yet a surer poison is not in nature internally given.

⁺ For the various preparations of these medieines, see the third part of my Treatise on the Venereal Ditease.

We will now proceed to fuch preparations, as are more chemical; and the first is the factitious cinnabar.

OF FACTITIOUS CINNABAR.

ought to be prepared by a rash of to-

The London Dispensatory orders twenty-five ounces of mercury, to seven ounces of sulphur; the mercury to be incorporated with sulphur when melted, and then the mixture sublimed. Certain it is that the common æthiops mineral makes as good cinnabar as need be; and those who make it their business to make

preparations of mercury seems to be inactive; such are tumours where the acrimony lies concealed under the skin, that will admit of imbibing such medicine only as are easily rendered volatile. Those kind of tumours are buboes, phymata, gummata, venereal excrescences, &c. in these cases we experience the immediate effect from crude mercury; because the particles from their vivacity infinuate themselves, so as to become dissolved and afford their antacrid quality: for which reason the less the particles are entangled with terebinthinous particles, the better. Besides, mercury should in these cases act as a sedative; and this quality is here opposed by the stimulus of the turpentine prescribed in the dispensatories.

cinnabar for painters add more sulphur, than ordered in general in dispensatories, for the sake of beauty; but as they sometimes heighten it with arsenic, and other ingredients, it ought to be prepared by a man of integrity; particularly as it is afterwards in the levigating, too frequently intermixed with minium.

In regard to the qualities of cinnabar, it has been disputed by fome, to have any virtue at all; by others again it has been compared with the æthiops mineral; but both opinions must evidently be wrong. The colour might easily convince us of the one, that the combination with the fulphur is very different from the æthiops; and the sensible effect as a medicine, might eafily convince us of its virtue. Certain it is from experience, that it is one of the most powerful antispasmodics in pharmacy; and therefore in inflammatory fevers, one of the most efficaemmaliar

efficacious medicines, as a sedative. If the cinnabar of antimony has any advantage, and which I think is evident from the chemical process of it, it must be a diaphoretic quality from the antimony.

Much depends on the fineness of levigating the cinnabar; and this is best effected by grinding it with water on a flat marble and a muller, till it becomes quite impalpable; which should be performed under the inspection of a prudent practitioner, as the purity of this excellent medicine is of the utmost importance.

TURBITH MINERAL.

The turbith mineral is by a combination of double, treble, or quadruple its weight of oil of vitriol *; to

^{*} Whatever quantity of the oil of vitriol is put to the quickfilver more than what is necessary to dissolve it, is only lost and retards the process; therefore the oil of vitriol should be poured on by little

that of mercury, evaporated to drynefs; when it then becomes a white mass; after which it is edulcorated with water, and then it becomes a yellow powder.

This is a drastic emetic; and a precarious mercurial. First, from its being subject to adulteration; and secondly, from the violence it occasions in the system. On which account I would not use it without the greatest necessity; yet if judiciously managed may have many salutary effects, particularly in obtainate venereal cases.

RED PRECIPITATE.

The red calcined mercury, erroneously called red precipitate, is prepared by calcining to redness, quickfilver, with an equal weight

and little, till the folution is effected, and then again evaporated and edulcorated.

spill yd no bernog se throdhlornw to lin set bias

of strong aqua fortis. This preparation is a most excellent one
for external uses; for all kind of cutaneous eruptions and exulcerations
of every sort. But from the mischiefs occasioned by its abuse, it has
been by some condemned. The fact
is, it should never be used as an
escharotic; but applied in another
form, so as to act more gently;
when it will, with proper management, have the most salutary effects
of any external medicine whatever.

The simple process of red precipitate, or (more properly) red corrosive mercury, exhibits a variety of other medicines of the dispensatory. The solution of mercury in aqua sortis, is called solutio mercuris; when evaporated to dryness it is called the calx of mercury; when that calx is calcined to redness, it is the red precipitate; and lastly, when the precipitate is burned off with spirit of wine, (first hinted at by Helmot, who ordered spirit of wine to be distilled from it) it is called carolline mercury, arcaname corallinum, pulvis principis, and other pompous names, and sometimes administered internally; however with as little propriety as success; many having been ruined by it, and as many sent to the grave.

35.1

Let it be ground upon a flat marble with a muller, with a little water till it is quite impalpable, and then dried for use *.

This preparation, when mixed with a little simple ointment or cerate, answers the end of every other plaister, ointment, lotion, &c. for ulcers, of any kind whatsoever.

* The precipitate when levigated loses its red fparkling appearance, and takes on a dull yellow hue. This, though wholly infignificant with respect to its medical virtue, has been objected to, not only by druggists (who in some respects are pardonable) but even by practitioners. However, certain it is, that by this preparation it loses not only its escharotic acrimony, but becomes one of the fafest and most powerful external mercurial. But internally it is of a precarious and deleterious nature, in whatever form it is given; not only on account of the adulteration with minium, &c. which it is liable to in its preparation; but from the acrimonious combinations of the menstruum it is dissolved in, which is too firmly united to be separated by spirit or water. names, and forestmen adminificend internally

Sowerer with as Lindar propriety as facetal inches

WHITE

WHITE PRECIPITATE.

The white precipitate, is made by dropping a strong brine into a solution of mercury with aqua fortis, till a white powder precipitates; and which is to be edulcorated with many warm waters, till it has lost its acrimony; and then it is to be dried for use.

This is undoubtedly a very good preparation also, and partakes much of a nature of calomel and the turpeth *.

* This was a favourite medicine of the great Boerhaave, who pronounced it the best mercurial preparation for internal uses. He mixed it with three times its quantity of loaf sugar, and then he called it a panacea mercurialis, of which he gave from six to ten grains, as a gentle emetic and cathartic; and attributed to it many virtues, particularly in chronic diseases. Wurtz has directed the oil of tartar per deliquium, to be dropt in the solution instead of the brine, till the effervescence ceases; which precipitates a brownish powder, and is to be edulcorated as above. This is called after him the brown precipitate of Wurtz, and is somewhat milder than the white precipitate, it may be given from six grains to twenty.

E 2

For

For external uses, where the parts are delicate and tender, it may be presented to the red precipitate. For internal uses I have no other objection to it, than its being subject to retain inactive particles of the metal, and some of the insoluble particles of the menstruum, and hence resemble much the turbith; being very apt to cause a nausea; which however, in some cases, is highly beneficial, as will be pointed out hereafter.

CALCINED MERCURY:

MERCURIUS PRECIPITATUS, per fe.

Purified quickfilver is fet in a broad-bottomed glass vessel in a sand-heat, for several months, leaving a little opening for the admission and circulation of the air, and shaking the vessel now and then, by which it will gradually be reduced to a dusky red powder.

This

perhaps more on account of its fungularity and tediousness of preparation, than from its intrinsic virtue in distinction, from other more easy prepared mercurials. Certain it is, that it admits of the greatest purity; as it is nothing but the real mercury, free from any admixture, and in itself very minutely divided. It affects the animal system very powerfully, for four or five grains acts both as a drastic vomit or purge; much in the manner as turpeth mineral, or the caroline mercury.

This preparation proves to us, that the strength of the precipitate mercurial medicines depend more on their divisibility of particles, than on the additional stimulus the turpeth and red corrosive receive from the mensurum they are dissolved in. At present this tedious prepared medicine is greatly laid aside by the rational class of practitioners; since observed

E 3.

expe-

experience pleads nothing in favour of its preference to the former.

gularity and tidiosificts of

The alchymical adepts, however, have great faith, that some grand mystery lies concealed in this very calcined mercury. The rational chymist, however, will only admit it to be deprived of its plogiston, which any other metal under fimilar circumstances (proportioned to the various nature of the metal) are liable to, on the same principle. For when to this calcined mercury is added charcoal, and again exposed to a gentle heat, the mercury is revived in its metallic nature; but if it is per se exposed to a strong heat, it may be converted into a mercurial glass.

The famous Mifaubin made pills of this mercury, and corrected it with opium. These pills had their turn of being celebrated. Next came another improvement, called mercurius animatus solaris; this elevated medimedicine consisted of equal weight of quicksilver and gold (the quicksilver being first, by a laborious process, purified nine times over with regulus of antimony) the gold and quicksilver being then amalgamated, and exposed to calcination by a gradual slow fire, like the former.

This medicine has been highly extolled by Hoffman and other German physicians, for its manifold medical virtues, both in acute and chronic diseases. There is a great probability that the gold is more mild than the calcination of mercury per fe; or in other words, renders it less active: but I am very apt to think that the alkalized mercury, by the fame process, would not only produce a medicine more cheap but far more. efficacious. In fact there is no necessity for either of them; for calomel answers every purpose better; and if a medicine of this kind is want-E 4 de led

ed more active, the turpith, or white precipitate is powerful enough.

SUBLIMATE CORROSIVE MER-CURY.

Sublimate corrosive mercury, according to the London Dispensatory, is made of purified quicksilver forty ounces; sea-salt thirty-three ounces; salt-petre twenty-eight ounces; of green vitriolealcined sixty-six ounces. The quicksilver is to be previously mixed with corrosive sublimate already made, one ounce; and the whole sublimed according to the directions given; which are somewhat troublesome.

The Edinburgh Dispensatory in this preparation is considerably more concise; it orders the calx of mercury, (which is mercury dissolved in an equal quantity of double aqua fortis, and evaporated to dryness) and decripitated sea-salt, equal quantities;

quantities; which is mixed and fublimed in a fuitable matrafs. Whence it appears plainly, from a chemical enquiry, that a folution of mercury in aqua fortis, with an equal quantity of falt mixed together, put in a fuitable matrais, first by a gentle fire to evaporate, or to draw off the aqua fortis, and then to increase the fire for sublimation, cannot fail, of producing a fublimate the fame as above. For it is the strong combination of the nitrous and marine acid with the mercury, which in a firict union, is forced to rife into a fublimation. Oil of vitriol and falt. will answer the same intention; particularly, when the mercury is previously dissolved, with a sufficient quantity of aqua fortis, in order to incorporate the ingredients, with more ease for the operation.

Hence we see how easy this process of sublimation is performed; and as it is so very useful and powerful erful in so very small a quantity, I sincerely wish, for the benefit of mankind, that every practitioner would have it prepared under his own inspection: for its great virtues, depend intirely on its purity, as I have pointed out before.

This medicine is certainly the most powerful, and L am inclined to think endued with the most medical virtues; yet it may be rendered one of the most active of all poisons. It is but of late years, we have been fortunate enough to have its great efficacy consirmed by judicious practice*. The use of it as an escharotic, I hope, however, will be banished from surgery, as a destructive practice of quackery and ignorance; as

^{*} The celebrated Baron Van Swieten first introduced this medicine into general practice, particularly in venereal cases; though various skilful practitioners have ventured on it before, but with more timidity. For external uses it has long been exhibited, and with the wished-for success; nevertheless it has shamefully been abused by using it as a caustic.

thereby its great benefit is perverted into the greatest abuse and mischief.

When we duly consider its quality, we shall plainly perceive, that it consists of a perfect disunion of its metallic particles, and is actually reduced into a truly faline flate; (to which all metals are equally subject) and thereby become quickened in their penetrative quality. This I think is plainly the case with this mercurial preparation; and fo true it is, that the more it can be combined with the mineral acid, the more powerful it is in its operation; that is to fay, the less quantity will fuffice. To afcertain the certainty of its strength, is by trying how much will dissolve in a certain quantity of water, and that which dissolve most and foonest is certainly the strongest and best *. The solution of corro-

^{*} A mercurial falt even stronger than the sublimate, may be made of any of the precipitates again combined with the muriatic falts. Dr. Collin, by E 6

five sublimate is at this time well known to every judicious practitioner; but it has been questioned, which of the two, an aqueous or spirituous menstruum has the preserence? The aqueous * is undoubtedly the most acrid, to the taste and stomach; but this is not a proof of its being the strongest. I apprehend the spirit sheaths in some respect the saline particles, from becoming too

this means has prepared a mercurial falt, which he calls mercurius folutus. This again he dissolves a grain in an ounce of water, of which twenty drops is a dose; containing 1/24 of a grain of the preparation.

The aqueous solution of sublimate mercury, is the basis of Meridant's drops. The solution of sublimate mercury in water is the basis of the green precipitate. The process is this; sour ounces of sublimate mercury is dissolved in a quart of spring water; next the filings of copper an ounce, and a half is dissolved in eight ounces, till a blue tincture is produced, which tincture is dropt into the mercurial solution, which will produce a green precipitation, and this must be evaporated to dryness. This has been recommended as a specific for the gonor-rhoea, given daily from two to six or eight grains; but the composition of the copper, proves it evidently a rank poison, in how small doses soever it is given.

stimu-

stimulant in the first passages; but when introduced in the fanguinious mass, the effect will certainly be equally the same. Whilst therefore spirit may convey its use with more ease than water, I would always prefer the spirituous solution *; particularly, as with this vehicle, balfamics and nervines, may at the same time be introduced, as a protection to the stomach and the whole nervous fyftem from any violence its combined faine particles might occasion. The uses of sublimate mercury are universal, and the most powerful of any mercurial, but requires of all, the most skilful application.

Internally I would not exceed an eighth part of a grain for a dose; and given not above twice a day in the most desperate case. I hold it for granted,

that

^{*} There is however one objection to a spirituous folution, and that is, the mercury is subject to precipitate; but this may be prevented by an addition of sal armoniae in the sublimation of the mercury.

that the easier it may be introduced into the system without becoming burthensome, or obnoxious, the more benefit we may expect, and will certainly receive from it; and hence also I would ever make this my rule, that every dose which proved disagreeable to the stomach or system, should be deemed too much *. Of this I shall have occasion to say more hereafter.

Dr. Ward's white drops is a preparation depending on a faline state of mercury. The fum and fubstance of his prescription is this: copperas is to be exposed to the open air, when it will gradually be reduced to a white powder. Of this copperas, when so reduced, and pure nitre, take equal quantity; make a strong aqua fortis (properly spirit of nitre) and again distilled, in order to make it the purer. To fixteen ounces of this strong and pure aqua fortis, put seven ounces of volatile sal armoniac, by small parcels, till the effervescence ceases. To a pound of this folution, put four ounces of quickfilver, and if it is capable to dissolve more, put in more, till a precipitation ensues. Heat the solution, and put it into a stone bason, and set it in a cool cellar for crystalization. Of this falt take one pound, and the finest rose water three pounds, give it a gentle heat that the whole may become a uniform folution.

CALOMEL, Or DULCIFIED MERCURY.

Calomel, is the dulcifying of the former, by adding fresh quicksilver and repeated sublimations. The London Dispensatory orders four ounces of sublimate to three ounces of quicksilver; to be well intermixed, and the sublimation repeated se-

Though the process of this preparation might be more facilitated, yet as an original production it has great merit, and a deep chemical principle for its basis.

Whatever has been faid of Dr. Ward as an empyric, giving every man his due, his greatest enemies must even allow him to have been possessed of acquisitions beyond any that have ever been taught in the most celebrated universities of Europe. And with respect to his natural qualifications, perhaps a better man never practifed the art of healing, or saw into the human economy through a truer medium than Dr. Ward.

It is to be lamented that so great a man had not all the advantage of education to bring to view his genius and strength of judgment; as he might not only have been a light to his cotemporaries and posterity, but an ornament to the country that gave him birth.

ven times. The Edinburgh however orders the sublimation but six times; and which indeed is more than what is done in general; though it ought to be observed, in order to deprive it of its saline and acrid particles. Now this preparation appears to be a fublimed calx, (if I may so express myself) whose faline particles, together with the mercurial, have lost their quality of being dissolved in water, owing principally to the repeated fublimation; and that may be one reason, that it is not fo immediately active in the animal fystem; though it is not exempt from being diffolved by the animal alkalescency in the fluids.

It is an admirable medicine. I fincerely wish, for the good of mankind, that practitioners would advert more to its qualities, than they hitherto seem to have done. And at the same time, that they would consider, that though it operates mildly,

yet

yet it is powerful in its effects; and therefore the doses should be suited accordingly. For my own part, I am convinced that a dose of one grain, affords more benefit than that of a drachm. My reason for this is needless here to repeat; but my greatest voucher is experience. And as a fair trial is on the safe side of the question, I strenuously recommend it; being consident success will declare in my fayour.

There is however one thing which I must not omit here; and that is, that the virtue of this excellent antacrid, depends next to its purity, greatly on its levigation. Dry levigation is doing of nothing. Let it be ground with water by a muller and marble till it is fine enough almost to be suspended in water; then let it be decanted off with water as often as it is requisite to separate the fine from the grosser particles; and then let it be washed once or twice before it

90 ON PREPARATIONS, &c.

is dried up for use. By this means it becomes not only sufficiently fine, but freed from all the acrimony it might retain from the sublimate. Many mercurial preparations have been termed the panacea of mercury*, but this excellent medicine does not only answer the purposes, but is the gentlest and safest of them all; which I would ever recommend to the practitioner, who can resist prejudice, and has the wessare of his patient at heart.

gation is doing of nothing. Het it he ground with weter by a multer and

Florite algoons onthat it illis oldner.

to be furpended in water ; then let it

be decanted off with water as often as

it be washed once or twice littling it

most and add atments of still upot si ti

^{*} The coralline mercury has been called the real panacea of mercury. In imitation of that, the calomel was ordered to be burned off with spirit of wine also; but without having the least effect in making it either better or worse.

with the definition of the state of the stat

REMARKS

On the Purity and Sophistication of Mercury, and its various Preparations.

AVING thus examined into the various preparations of mercury, it remains to point out the criterion of their quality, and how to detect their adulterations.

Quickfilver must be bright and vivid, without a skim, or leaving a blackness on the sides of the glass, when turned about in it *. If suf-

* The purest quicksilver will however assume such a hue, if strongly shaken, as by that means it may be triturated per se. Quicksilver has always an inclination to become globular, which evidently appear when stirred about with the singer, if a little is put on a clean piece of paper; but if adulterated its form is lengthened something like little worms, and seems pasty, and has a very dull appearance.

: andah

add-theon diew bosself of pected)

pected, put a little in a crucible, and let it gently fumigate, (taking care of the fumes) and the lead (if any) will be left at the bottom in a pastelike scoria; or in a metallic substance. Squeezing it through leather, is not always a criterion of its being purified, unless the sophistication is made very clumfy indeed.

As lead will fweeten vinegar, mercury, athiops-mineral, calomel, and cinnabar, if suspected, may be steeped for some time in vinegar and shaken; if it sweetens the vinegar it is certainly adulterated.

Another trial is however more expeditious; put a little on a hot poker, or fire-shovel; if it is pure, the whole will entirely sume away; but if sophisticated with lead, a scoria will be left behind.

All sublimations in the crude, mould be striated with needle-like flakes;

flakes; the corrofive sublimate, the calomel, and the cinnabar: but if they
have been sophisticated with arsenic,
or with lead, or both, in the corrofive
sublimate, they will differ from that
regularity of striation *, and appear
confusedly granulated. If to a solution of sublimate in pure water, be
added lime-water, or a solution of a
mild alkali, a precipitation will ensublimate is sophisticated, the precipitation will be more to the brownish
black.

But these experiments, though just to true principles of chemistry, are not so nice to general observation, as I could wish, in order to detect so small a quantity, as may actually be pernicious.

I can therefore but repeat my admonition to every honest practitioner,

^{*} Sublimate has the least of this striation.

that the greatest proof of their purity is to have them prepared under their own inspection; unless they can depend upon the integrity of the preparer. And to patients who may stand in need of them, I sincerely advise to be cautious, to whom they trust their health and lives. It is a melancholy reflection, seriously to confider, how shamefully the lives of men are sported with in this opulent metropolis, by the worst of all affaffins quacks; not only through their ignorance and presumption, but by their most miserable and sophisticated drugs. Their toleration is a reproach to the British legislature, and the respectable faculty itself. as I could with, in other

Concluding these two important sections, I wish what has been advanced concerning the good and bad effects of mercury, may prove

Sublinante bas the lead of this friadion

as beneficial as I intended they should be *.

* As a farther fatisfaction in discovering the true quality of mercurial preparations, I shall here annex a table of specific gravity of mercury, and its various preparations; together with other articles as may be used in the chemical operations of that medicine.

A TABLE of SPECIFIC GRAVITY.

Quickfilver distilled once	14,000
Distilled twenty times	14,010
Corrofive fublimate	8,000
Calomel thrice fublimated	9,882
Six times fublimated	8,200
Turbith mineral	8,233
Factitious cinnabar	8,200
Red precipitate	8,255
White precipitate	7,000
Æthiops mineral	7,400
Rain Water	1,000
Human blood, new drawn	1,040
Spirit of wine rectified	0,866
Aqua fortis	1,300
Oil of vitriol -	1,700
Butter of antimony	2,470
Fine gold	19,640
Fine filver	11,091
Fine copper	9,000
British lead	11,325
Fine tin	7,471
Iron	7,645
Platina	71,233
	Bismuth

96 REMARKS ON MERCURY.

Bifmath	9,700
Mercalite	4,589
Antimony	4,000
Nitre	1,900
Vitriol in violet and about a last radius	1,580
Vieriolated tartar	2,298
Amoniac falts	1,453
Common fulphur -	1,800
Crabs eyes	1,890
Cerus -	8,940

ndpell.

8.255

cdoss

Odbes

0.01

0180

OPTAL

otas

0 3.01

100,11

Bilmaia

MARLE OF SPECI

Odiciative diffiles once

Comeluni, e intelliga

Corresponding

Factor majoral Lachusas clausias Red procipitate

stated here shall w

Landini and 1178

Run Water

than book estruct

Whom it was to reason to

PART

luiniv le ho

Mane gold ...

Fige filter

Evel tance medicing became a re

cates him claimed their

to owned, is biglis coquities, in

senfortunately. The tombdation of

tentions of This confidence out is another

Of the Medical Qualities of Mercury in various Diseases.

Tremains now, to point out the many falutary effects of mercury in various difeases. This I do the more chearfully, as I have been so fortunate in my practice to have experienced its many beneficial virtues.

But before I proceed to particulars, I must beg indulgence to remove, at least endeavour to remove, one of the greatest stumbling blocks, that has, and still obstructs the path to true medical indication.

michi Fo Lainend o Ever

Ever fince medicine became a regular study, the distinction of diseases has claimed the greatest attention. This consideration, it must be owned, is highly requisite, to form a rational method of cure: But unfortunately, the foundation of those distinctions, has been, and through prejudice too much remains yet, very erroneous, to the injury of rational indication. No medicine has proved the justness of this affertion so much, as the uses of mercury, in common practice.

That diseases differ, is obvious to the meanest capacity; but to indicate the method of cure according to their causes, must, on the least reflection, appear repugnant to reason and common sense; and yet incompatible with common understanding, as such a distinction of diseases is, do we not see that the generality of practitioners are prejudiced by this erroneous method of judging?

There

There is something in the very sound of mercury that brings to mind the venereal disease, like as the bark carries with it, the recollection of severs: Because they seem to be the stipulated medicines for those peculiar disorders; but the question why they are so, I apprehend would puzzle a man more than he is well aware of; especially if plain understanding might be admitted into the debate.

If we consider on what principles the mechanism and motion of the animal automaton acts, we shall clearly find; first, that its movement depends on the irritability of the nervous system, which spreads itself with innumerable branches and ramifications into the whole animal fabric; whereby all the parts are excited to their peculiar functions, contributing their respective shares to the welfare and preservation of the animal occonomy. Secondly, that

this irritability is acted upon by the fanguineous mass; which is sent forth by the systolic contraction of the heart, through the numberless arterial canals in the minutest parts, as a succour, support, and reparation of every part, that constitutes the whole machine. Thirdly, that the fabric must have a perpetual supply, in order to give force, and to replenish the various substances, that the wear and tear of a continually moving machine is subject to. And sourthly, that the structure of the various parts, must be preserved in their natural formation.

This leads us to distinguish diseases accordingly. In the first place, the nervous irritability may be acted upon, too much or too little; the circulating humours, may either contain too much, or too little stimulus. The food from which the mass of blood is generated may produce many obnoxious sluids; and lastly, the

formation of the structure itself is subject to natural decay, and liable to external or internal injuries.

Secondly, the folids and fluids have fo strict a dependance on each other, that health and disease is inseparable from either. And, as life or animation is the result of animal mechanism, insomuch, that every individual part contributes its share, it follows as a natural consequence, that the mental, and mechanical operations, are in the strictest union with each other; and, that pain and pleasure must consequently be reciprocal.

Now from the delicate structure of the human mechanism, we are subject to many evils proceeding from all these primitive causes before mentioned. But, whilst the stamina of the solids in respect of their action depend upon their proportional irritability, and the mass of blood upon its proportioned alkalescency to act upon this irritability, we F a may

may clearly see that the distinctions of diseases depend principally on the parts that are affected, and on the redundancy or deficiency of the stimulus, which acts on the nervous irritability.

As to the various causes commonly assigned, though they are innumerable, they are only to be considered as the first disturbers of the animal œconomy; but whilst one cause may produce many various diseases in different subjects, or under different circums stances, and a variety of causes, may in various subjects terminate in one evil, it must at once be obvious, that they can, or ought to claim the least consideration in a curative indication.

Mercury has been the esteemed universal antivenereal medicine; but if we examine into the cause, why it has been esteemed so, we shall find, that this notion has had no other origin, but, because it was first administered in the lues venerea; and indeed with

with good and bad fuccess, according to its proper and improper application. blood stil to stedd tadt ni

If we, however, examine a little into the venereal disease, we shall find it first kindled by an infectious animal acrimony, fowed in the animal system; and that the progress of the lues venerea has as many evil effects, as almost all the rest of diseafes produced from a variety of causes: But, on the other hand again, do we not find in general practice, that evils are produced by a variety of other causes, that act in every respect like those produced by venereal infection? And if we let reason prevail, will not the samemethod of cure prove equally beneficial? For my own part, ever fince I have been at liberty to think and to act for myself in physical matters, I have not only been fortunate enough to experience this truth, but have often with surprize wondered, that these facts, so obvious to reason, should however

should remain so long buried in obscurity; or in other words, that men, in that sphere of life, should not see this truth, in the same point of view.

Solids and fluids act alternately upon each other; and their combination is so intimately blended as scarce to be separable in a physical sense. When the irritability of the nervous fabric, which partakes of the whole system in its most diminutive particles, is acted upon, the irritability of course must be excited to produce a preternatural action in the various parts that are more immediately concerned. If this preternatural action begeneral, affecting the whole system, a fever is produced; if particular, an inflammation; or indeed both fever and inflammation, as being nearly fynonimous.

Now this may be caused either from an acrimonious blood, from a sudden emotion of mind, or from other external or internal injuries. But be however

however the cause what it will, the effect still may happen to be the same.

Again, if the nervous system, either universally or partially be excited to a preternatural motion, it must consequently accelerate the motion of the circulating fluids; and by this generate acrimony, and a redundancy of alkalescency; which from the commotion it occasions in the various fecreting organs, may either constrict the secreting tubuli, or excite them in their secretion, and thus occasion a number of different maladies that probably have but one cause for their first foundation. The occurrences in life are both various and numerous; and the various changes in the animal occonomy differ accordingly, and may lead to more effects than man can with all his finite wisdom conceive. A malloment faver, a corfunter

The formation of the animal structure is wonderful in all its parts; and fince fince life, animation, mental operation, or that which is the same thing the animal soul, is insused throughout the whole; it thence follows, that each individual part becomes endued with a spirit of self-preservation, and thereby contributes to the good of the whole system. But lest I should insensibly be led from the conciseness I intended in this presatory differtation, I will hasten to a conclusion.

Whatever be the cause of a disease, the effect may happen to be the same. The first onset is a preternatural action in the nervous system; which a ting on the fluids, contaminates them, and creates acrimony. Diseases, therefore, vary only according to the parts that are affected, and according to their manner of operation in the animal economy.

A malignant fever, a dysentery, convulsions, palsies, and many other internal diseases, may either have an infection

infection, venereal and endemic, or an error in life, as cold, drunkenness, luxury, &c. or even an external accident, as a wound, bruise, burnings, &c. for its cause; and yet the direful effects may be the same, consequently require one method of cure, according to the action of the disease present. Cutaneous or glandular disorders, ulcerations, tumours, and other external diseases, &c. &c. are often sound the very same, tho their causes are materially different; yet the cure, if successful, must be attempted the same way.

All the aid which nature requires from art, when her sacred ways are disturbed, is, in one word, to destroy the preternatural acrimony in the animal system. And our success will depend upon, our acting upon it, wherever it lies most open to our attack. This is the greatest art we are capable of; and if we are successful enough to perform this, then na-

But let it be ever rengem -

bered,

ture,

108 MEDICAL QUALITIES ture, ALL KIND NATURE, will perform the rest.

The prodigious herd of diseases, especially according to their cures. are the mere arbitrary distinctions of men, who have been led away either by their own bewildered judgment, or by the errors of others, and have. tended more to puzzle than to enlighten the understanding. Let us confult nature, and we shall find the of diseases but few. distinctions Many, very many, (I mean diseases with respect to name, not to nature) will yield to one medicine; and out of all the medicaments, simple and compound, very few indeed, if skilfully selected, are sufficient to afford us all the benefit, which with the help of nature, human wisdom is capable to give.

Mercury, I deem the principal of those sew. From the benefit of this sacred drug neither sex nor age is excluded. But let it be ever remembered, bered, that the salutary virtue of a medicine, depends on the judicious use of its poisonous quality.

OF CUTANEOUS DISEASES.

The skin is liable to a number of various diseases, with respect to their appearances, causes, and malignity; but with respect to their nature, or what is more to our purpose, with respect to their effectual method of cure, they may be considered of two kinds. The first is the eruptive, where there is actually a discharge: the second, where the malignity yet lies concealed under a whole surface.

I shall not here enumerate the various denominations, or the description of their appearances; this I have done in my Treatise on the Venereal Disease; but here only observe, that whether their cause is a venereal infection, or from any other acrimony, mercury is the most effectual application,

110 MEDICAL QUALITIFS

cation, and what may be adminiftered with the greatest safety.

Where there is an actual eruption, from the itch upwards to a leprofy, or universal scurf, whether from a venereal or any other virus; red or white precipitate are the medicines that will prove the most safe and effect an expeditious cure. For the particles of that preparation of mercury, acting immediately upon the acrimony, affuage the malignity in the lymphatic tubuli, release the stamina from the acrimonious stimulus, and then give them liberty to recover their natural form again. At the same time, whilst these preparations are not volatile, they will not be subject to penetrate the skin and affect the system. But it is quite otherwise with the ointment, where crude mercury is concerned; which though equally powerful with the former, has this inconvenience, that as the crude mercury is volatile, it v is the mon effected appli-

canon,

will be absorbed by the absorbing lymphatics into the fystem, subject the patient not only to salivation, but (as is hinted at in the first of this book,) be liable to create additional evils.

The best medicine I have experienced for external purposes, is the antacrid cerate mentioned in my Treatise on the Venereal Disease: it may however be varied many different ways. For common purposes, two drachms of fine levigated red precipitate, with an ounce or two of neat pomatum, will prove very efficacious; and to give it a more agreeable colour a little cinnabar and white precipitate, or calomel may be added.

No. I.

R. pomat. rosar. zii.

Merc. præcip. rubr. pulv. subtil. zii.

cinnabar. Di. calomel. sive mercur.

præcip. alb. zi.

This

112 MEDICAL QUALITIES

Est. bergam. gr. viii. vel. x. Misce, siat ung. contra acrimoniam.

When the skin is very scabby, and a slough should seem to be concealed under disagreeable scabs, it will be requisite to have the scabs softened, and a medicine to penetrate somewhat deeper than the external surface. To this intent I have found of singular service a mercurial solution added to a saponacious liniment, as sollows:

No. II.

R. liniment. Sapon. Ziii.

Merc. subl. corr. gr. x. solut. in aq.

Misce, fiat linimentum mercuriale.

This liniment, frequently rubbed on the scabby parts, will not only soften them, but act on the concealed acrimony; thence they will peel or fall off, and the above ointment will operate the more effectually. This

This liniment may also be used with the addition of water as an universal wash, or a bath, in the like circumstances. In all cutaneous disorders, I always suspect an acrimonious blood; and therefore to correct the system by internal mercurial medicines is highly requisite. Calomel for this purpose I esteem the gentlest and most efficacious medicine. I must also repeat, that the virtues of this great medicine, consist in giving small doses, that it may operate in the animal occonomy without disturbance.

No. III.

R. calom. pp. 9i.

Amyl. & facc. alb. fing. 9i.

Misce fiant. pil. No. xl.

Of these pills, according to the age of the patient, one, two, three, or four in the day may be given. I am not an advocate for purges, because I always succeeded better without them;

114 MEDICAL QUALITIES

them; yet if the habit is gross, a purge may be allowed of. My cathartic pills, mentioned in my Treatise on the Venereal Disease, may, in this case prove very beneficial, or a common purge of jalap one scruple, and calomel three grains, made up into a draught or bolus.

This then is my first division of cutaneous disorders; and let their external appearances be ever so disferent, or acquire ever so many various denominations, to destroy the acrimony must be the whole medical intent.

I shall not here enumerate the various kinds of cutaneous disorders *, but only observe that the abovementioned neat and effectual medicine is, at any rate superior to the disagreeable and tedious method frequently administered; as to the fear of driv-

; meda

See my Treatise on the Venereal Disease,

ing the acrimony into the blood, by its speedy efficacy, that is entirely groundless; for it acts by virtue of correcting the acrimony, which is materially different from applications that repel. On the whole, the body should be kept tolerably warm, in order to preserve a gentle perspiration; but without forcing sudorifics, through a mistaken notion of driving out the acrimony—kind nature in this respect, with gentle warmth is ever sufficient.

The second kind of cutaneous districtions, is when the malignity lies concealed under whole skin. These are always of a more stubborn nature; and in venereal cases, as well as from any other virulent malignity, have sometimes a fixed deep root. In this case I prefer crude mercury; because from its volatile quality, it is more active in penetrating the skin, and acts upon the hidden acrimony. The volatile mercurial liniment, mentioned in my Treatise, is the most

most powerful I know; for the spirit of sal armoniac and camphire will penetrate the pores, and open a passage for imbibing the mercurial particles. Where the place and the tumour will admit of it, I have always applied a mercurial plaister, spread upon leather, with success; regardless whether the cause was venereal, or from any other acrimony in the system.

Whilst however the mercury is thus more forcibly introduced thro' the external tegument, it is liable to enter the system, and if not properly balanced affect the salivary glands; or otherwise, if sophisticated, the inactive particles are subject to be confined in the minute stamina of the system, and thence subject the patient to many additional evils. In the using of this kind of mercurials therefore, it is requisite that the patient be kept warm, and in a continual gentle perspiration; and that the

least tendency of the mercury towards affecting the falivary glands may be prevented, the system should be balanced with contrary evacuations.

cind thurs confidently operate mich If these rules are observed, and the mercury pure, that constitutes the medicines administered, the method is fo far from producing ill effects, that even at the same time the external application operates on the external acrimony, the absorbed part which enters the system will also attack the acrimony lurking in the blood.

called at solo Lesausagil rigina inclamen Under the class of cutaneous diforders which I here have treated of are the venereal kinds included; fuch as gummata phymata, encysted tumours, and venereal excrescences in general, under whatever denomination. It must, however be observed, that as the external furfaces may differ, the medicines, with respect to the application, should also differ. The tho vino; esonouterero to buickwart;

(MID) Litt week constructed her

118 MEDICAL QUALITIES

wart kind, and fuch as protuberate beyond the furface and appear safe for extirpation, should first lose their crusty surface, and then the medicine must consequently operate with more certainty. I have treated circumstantially on that head in my Treatife on the Venereal Disease; here I shall only observe, that where fuch extirpation is practicable, it should ever be performed with a good bistoury, or elfe a good sharp pair of sciffars. But the method as some of our modern authors have advised us, namely, with ligatures, ought to be condemned as tedious, painful, and hazardous; but yet more so, caustics, which ought ever to be rooted out of practice, as poisonous weeds sowed by the enemies of mankind.

Before I conclude this fection, I think it will prove of some advantage to mention the piles. I shall not here enter into a disquisition of these kind of excrescences; only ob-

general, under whatever denomina-

4

ferve.

ferve, that from the plentifulness of the nervous ramifications, appearing in the verge of the intestinum rectum and the sphincter ani, together with the numerous and large branches of the hæmorrhoidal blood vessels in those parts, an early and proper application is of the utmost consequence; and whatever some have pretended to the contrary, no remedy whatever has proved so powerful, and given the afflicted patient more ease than a mercurial application.

Having in this respect had singular success, even in cases that have threatened the worst of consequences, I shall lay before the reader a recipe, that merits a grateful reception in practice.

No. IV.

R. limatur. stan. opt.

Argent. viv. aa. 3ii. amalgam.

Mere. præcip. rubr. pulv. subtil. 3 ii.

Pomat. rofar. 3i.

Ol. menth. pip. essent. gut. xx.

Mise fiat ung. contr. kæmorrh.

This

MEDICAL QUALITIES, &c.

This ointment spread upon lint and immediately applied, will not only abate the temporary tumefaction, but assuage the pain almost instantly. And I have known instances, that patients who for years have been afflicted, have, by its continued application, had these painful tumefactions entirely obliterated.

dy whitevery at the West and the vestillar vis and given the will deal and bear cafe than a mercutial application. and an enclosing the state of the same and the same Havingtin this religion and Suggestir Anceefa. evenin cufes chathere et testened the work of conformed I thall lay before the reader reader. that merits a graceful reception in

pretended to the continue.

Of Inflam-On march. pip. of the gun next Albands Milite fat ung. centr. ramorro.

ailT

Per ingatur! fan. vor. ver

Of Inflammation.

WHATEVER be the primary cause of inflammation, whether external injuries, or internal acrimony of habit, the morbid effect is liable to be exactly the same; for the immediate acting cause of inflammation is a spasmodic constriction of the nervous fibrillæ in the circulating tubuli; whence the pungent pain, the obstruction of the circulating fluid, the distention of the weaker veffels, and the tumefaction of the part affected, are produced.

It is an invariable law in the animal œconomy, that irregularity of circulation, and acrimony of humours, are the inseparable consequences of each other; and for ever become each other's provocative.

G External

122 OF THE MEDICAL QUALITY

External injuries will stimulate the nervous sibrillæ to a preternatural constriction; thence the tubuli, according to their degree of tenseness, irritability, magnitude, and structure, will be excited to act contrary to their regular functions. Some will be constricted, whilst others will be dilated; and others, of more tender structure, will be extended, weakened, and torn, from the forcible impulse of the arterial stud.

Hence confusion must arise. One part of the humour will forcibly be acted upon by the resisting fibrillæ, and thence acquire acrimony of a phlogistic nature; another part, being imprisoned, must acquire acrimony from stagnation, and thence tend to putrefaction; whilst others again, from the laceration of the tubuli that contained them, intermingle, and generate acrimony, not only

only from their extravalation, but even from their preternatural combinations.

And whilst the fluids in the affected part degenerate into virulency, it cannot fail, that the whole system must share symptomatically; not only from the nervous consent of parts, but from an abforption of the acrimony by the neighbouring circulating vessels; whence the virus is liable to be transposed, and subjects the whole animal system to be contaminated.

If we examine into internal causes, we shall soon perceive the same chain of effects to be the consequences. For let the peccant matter be ever fo remotely produced, ever fo finall in its commencement, yet experience confirms to us, that inflammation, like fire, is liable, from the smallest spark, to become a dreadful conflagration G 2

gration of the whole animal fabric.

Thus much I thought proper to premise with respect to inflammation in general. With respect however to the application of a remedy, we must make a distinction of the various parts affected; for although I am firmly of opinion, that a Remedy, if well founded, must be equally beneficial to all kinds of inflammation, yet there are two very material confiderations to be confulted; the first is the immediate application to the part affected; and the second is to preserve the sounder parts from receiving injury from the topic applied. From these considerations we are clearly convinced, that the application of one and the same remedy, though ever so potent, will not do equally well in all parts alike.

Inflam-

Inflammations are univerfally allowed to have four different terminations.

- 1. Resolution is when the humours disperse, and the circulation is restored to its former tranquillity, without pain or tumefaction to the part that was affected.
- 2. Suppuration is when the delicate tubuli have been torn by giving way to the impelled humour or other injuries received; whence the extravasated sluid has been collected, stagnated, and degenerated into pus.
- 3. Indurate tumefaction happens when the fluids, once hindered from circulating, have concreted into unnatural fibres and condensated fluids; which either remain dormant without giving any sensible pain, or else become obstinate on being moved,

and give birth to many stubborn evils in the animal state.

4. Gangrene and sphacelus, the most terrible of all terminations of an inflammation; when the imprisoned and extravasated humours have acquired such a degree of putrescency, and acrimony, as to debilitate, corrupt, and even putresy the solid stamina of the part; to which mortification ensues; and which threatens destruction to the whole animal sabric.

It is needless to mention that refolution is the most wished-for refult; but before this is attempted
by art, it ought previously to be enquired, wherein the act of resolution should consist. A constriction
of the circulating tubuli is the principal cause of obstruction of the
studies; obstructed shuids will ever
become acrimonious; and lastly, if

the peccant humour is difperfed into the mass of blood uncorrected, the found parts must confequently be subject to be contaminated.

Hence it must follow, that the curative indication in inflammatory affections must tend, first, to relax the constricted folids, and secondly and principally, to correct the virulency of the fluids that are obstructed; when this is effected, then Nature, ALL KIND NATURE, by her falutary laws, performs the rest.

Mercury of all medicines is most endued with these qualities; and let the cause of the inflammation be either from external injuries, wounds, contusion, burning, &c. or from internal malignity of habit, arthritic, scorbutic, venereal, &c. the medical virtues of mercury will prove equally beneficial, if applied with judgment.

G 4 Although,

128 OF THE MEDICAL QUALITY

Although, as I have before obferved, an inflammation is ever of the same nature, notwithstanding its various causes, yet the constitution, the part affected, and the degree of injury already suffered, must needs claim the greatest attention with respect to the application, and the wished-for success.

Cutaneous inflammation is most exposed to be acted upon by the application; and the fewer parts that are either destroyed or lacerated, the more speedily will nature be restored; burning, scalding, blistering, friction, and the erisipelation, &c. all yield to one and the same remedy in proportion to the degree of the inflammation, the irritability of the system, and the part to which it is applied.

If the inflammation is on the extremities the antacrid cerate, or No I.

No I. spread upon a cloth, will prove fufficient for the cure; and the more external, the speedier will consequently be the fuccess. In cold, phlegmatic, very young, or very old subjects, a little camphire may prove a grateful addition; as that will enliven the fensation of the flaccid and distending stamina, enabling them to resist the obstructed fluids; and where the nervous fystem is enfeebled, the effential oil of pepper-mint will prove highly grateful.

But in irritable habits all stimulants should be avoided; and here it is, that an antacrid sedative will prove the most beneficial: not only; as a correcter of the fluids, but as a relaxer of the nervous constriction.

Lead, as an external application, is one of the most powerful antiphlogistics; where therefore it can

130 OF THE MEDICAL QUALITY

be used without having any tendency of entering the sanguineous mass, it may ever be deemed as a most salutary specific in cutaneous inflammations.

The most inflammatory erysipelas has yielded with immediate success to the bare admixture of litharge and vinegar; and diachylon plaister is capable of doing more good than all other plaisters put together, except the mercurial. For this reason the extract of Saturn might ever be added to the before-mentioned remedies in proportion to the tenseness and irritability of the fibres; but mercury always in proportion to the malignity.

The second class of cutaneous inflammation consists of those attending wounds, and those proceeding from contusions. Though it is seldom, that these inflammations are or Mercory! Of it

Inflammations of that kind may be faid to be compound. In wounds, the stamina are separated from their natural connection amongst themselves; and the inflammation in this case is merely symptomatical; owing to a painful division of parts, and a hindrance to the wonted course of circulation. Here therefore are two points to be considered; first, the reunion of the divided parts; and secondly, the resolution of the congested humours.

All therefore that nature here requires, from the art of healing, is barely to prevent acrimony of humours; the rest is performed by the facred laws in the animal economy.

But

132 OF THE MEDICAL QUALITY

But whilst wounds are so various, and some of so unfortunate a kind as immediately to commence ulcers, I shall say more of them under that head, and here only confine my discourse to inflammation; which, when it is attendant on a wound, depends principally on the union or the suppuration of the parts divided by the wound.

Spirits are for the most part the immediate application; and which, if applied whilst the accident is recent, may, by giving an astringent tone to the debilitated and yielding tubuli, prevent an influx of redundant humour; but when the inflammation has actually commenced, stimulants should then be chosen with the greatest caution, and only applied to lax and phlegmatic habits; for in irritable constitutions, applications of this nature have often proved

proved like throwing oil into fire with an intent to quench it.

Where, however, camphorated spirit of wine is requisite to be used, I have ever found an addition of the folution of fublimate mercury of fingular fervice; and when the nervous system has stood in need of a calefacient aid, the effential oil of pepper-mint is the best I can possibly recommend, and has the preference above any other effential oil.

N. V.

R Sp. vin. rect. Ziiii. Merc. fubl. cor. gr. x. Campbor. 3 i. Ol. menth. pip. gut. XX. M.

To some of this a little good claret may be added, and with the mixture let the part be fomented as occasion requires. I have frequently added or Extravalated hulhill

added also some of the extract of saturn with singular success.

Inflammation, proceeding from contusion, has something to be confidered different from those last-mentioned; especially if under whole skip. Whilst a wound is a division or laceration of parts, first tearing the surface, attended with an outlet of the fluids, so in contusions, under a whole surface, we find that the humour, which is forced out of the torn vessels, lies confined under the unbroken skin; and which is evidently discoverable by a livid and blue appearance of the tumested part.

Here the imflammation, as well as the former, is likewise compound; being partly symptomatical from the bruising of the circulatory tubuli, and the pressure and acrimony of the stagnated, or extravasated humour.

Because

Because therefore many of the stamina are by this injury debilitated, and the extravafated grume remaining in some respect inactive, we see, that this kind of inflammation is in go neral not so ardent, but at the same time more flow in recovering than the former; and for this reason too. may better be acted upon by spirituous applications. Here in particular the mercurial folution, combined with the camphor, &c. as in No V. proves remarkably beneficial.

Leucophlegmatic and scorbutic habits will fometimes have fuch livid fpots appear, as induce them to believe, that they have been privately pinched or received a bruife, to which it bears a near refemblance; but though these grumous extravafated spots are attended with a dull heavy pain, yet they cannot be strictly deemed an inflammation; because the effect of a debility, and not

not an irritability of the nervous fystem, is the immediate cause.

In all these cases, the saponaceous liniment, joined with a mercurial solution, will prove of the greatest benefit; for whilst the combination of alkali and oil is a dissolvent of the grumous coagulation of the extravasated humour, the mercurial solution will correct the acrimony, and leave the stamina of the solids peaceably to unite their parts, by which the circulation may again be restored. To this intent, I can from a successful experience recommend the sollowing.

Nº VI.

Merc. sublim. corr. Is. in sp. vin. 3 ii. solut.

Liniment. sap. 3 ii.
Ol. rorismar. 3 ii.
M. f. linim.

This

This liniment may either be rubbed on the affected part, or fome linen compress may be wrung out after being wetted, and applied to the parts. Should however the mercurial folution prove too strong for a delicate irritability of the part, it may either be diluted with more faponaceous liniment, or, which is the same thing, the mercury spirit and effential oil prescribed in less quantity.

Thus much will fuffice for cutaneous inflammation. When however the malady is deeper feated, it must be obvious that the muscles, glands, nerves, tendons, and the various vessels are of more consequence, the ardency and danger must needs increase in proportion.

Although in these cases mercury is most efficacious, yet the misfortune is, that the more benefit it **stands**

stands in need of, the more it is sheltered from the immediate effect of the remedy; and, as I have before observed, it is here, where crude mercury is preserable to any other; because the particles remain in their metallic volatile state.

A phlegmon deeply feated is too fensitive to have any thing applied of a stimulating nature. The inflammation requires emollients; but these even in an external application cannot be fufficient to give the wished-for relief. Ever since I difcovered the true quality of mercury, I have fuccessfully added mercurial ointment to the poultices applied; and have ever been more and more convinced that the indication has been justly founded. Extract of faturn. when the inflammation is great, will greatly alleviate the pain; as also, according to circumstances, a little camphor flands.

camphor may frequently prove highly beneficial.

Glandular inflammations, however, will receive great benefit from poultices, with mercurial ointment and extract of faturn. As to buboes, inflamed tonfils, and where the progress of tumefaction is but flow, as well as the pain rather dull though obstinate, I have experienced more benefit from a good mercurial plaifter in a few days, than every other kind of application.

The doctrine, that there is an absolute necessity of bringing all these kinds of tumours to suppuration, is both abfurd and injurious; nature frequently brings about a falutary resolution, in spite of every wrong method tried to the contrary. I believe there is not a practitioner (I mean a real practitioner) but what has had instances, that a fluctuation

of matter has been dispersed, to the agreeable disappointment of the patient, and likewise the practitioner himself (if he had the welfare of the patient more at heart than his prognostic).

I shall here give a poultice, which is as expeditious in the making and application as it is efficacious in all kinds of glandular inflammation.

Nº VII.

R Catapl. ex lact. & pan. # ss.
Ung. cærul. 3 ss.
M. & applicet. calid. ter. de die.

Those who prefer the mercury triturated with mucilages of gum arabic, &c. better than hog's lard, may give it the preference *; and it

* Mr. Plenck, in a number of triffing experiments of triturating mercury in a variety of animal and vegetable mucilages, flattered himfelf

is certain however it may be triturated with more ease in honey than any other thing, and may perhaps be more efficacious. I have always been fond of having an onion cut finall and mixed with my poultices, and have supposed, that it thereby became more emollient.

If however the inflammation or phlegmon ripens so as to form an aposthume, the reader must not suppose, that I have any objection to make an outlet, or bringing the abscess to suppuration. This by no

self that he had discovered a folution of mercury in the mucilage of gum arabic; thence was induced to form a new theory of the action of mercury on the falivary glands; and enlarged much on the effects of this new folution of mercury in the venereal disease. Although his medicine is not to be rejected intirely, particularly for external uses, yet he certainly proved himhimself unacquainted with the principles of chymistry as well as the animal occonomy.

means

means is my fentiment, nor does the addition of the mercury in the poultice any way hinder the forming of matter, at least to any prejudice; but on the contrary promotes it by relaxing the contrar

Ammation, attending heavy contusions, wounds, fractures, &c. formentations are frequently preferable, on account of reasons before deficibed; but as to the cause this should not make the principal consideration. The constitution, the ardency of the inflammation, and the parts that suffer, should be the principal guide in the application; mercury however should ever make part of the composition, in whatever

ever form or nature the application may be.

I shall now finally proceed to the dreadful havock of a gangrene and sphacelus. Whatever part is become cadaverous must inevitably be loft to the animal function, beyond the help of redemption by any medical aid whatever *. But the grand indication, in this deplorable circumstance, is to stop the rapid progress of putrefaction from consuming the yet founder part, and to en-

* Amputation, when a member is mortified, is absolutely the only chance a poor patient has; but in this operation are two things to be considered; first, that the limb is actually mortified; for I have known many patients who have recovered, that have been under fuch condemnation; and fecondly, that the patient is not on the decline of years, and of an emaciated constitution; for in that case amputation only ferves to hurry the patient the fooner into his grave. as regul ni vilsipsolo dided lo

them-

144 OF THE MEDICAL QUALITY themselves from the mortifying acrimony.

Whatever is possible (I mean in the power of medicine to perform in that dilemma) may be effected by mercury; and the earlier the application the better. Those parts which are actually become cadaverous should be scarified, and brought with all possible speed to suppuration. The angry inflamed part somented with N° VI. or, as a yet more powerful application, the following:

Nº VIII.

Merc. sublim. cor. 3 ii.
Tinct. cort. peruv. Huxam. 3 iiii.
Ather. vitriol. 3 iii.
Ol. menth. pip. 3 ii.
M.

This is a powerful medicine, particularly in those kinds of mortifications that proceed from a malignity of habit, especially in superannuated

or emaciated constitutions. It may at the same time, with the greatest advantage, be administered internally, affifting the folution of the fublimate mercury, so that the dose may be increased*.

If, however, poultices are more requifite, the extract of faturn, and crude mercury, whether in the ointment, or by any other method of extinguishing it, should be plentifully intermixed; and as the cadaverous fœtor from a mortification is absolutely of a pestilential tendency, the contaminated circumambient air

* The bark has very fuccessfully been prefcribed in that kind of mortification; it is not only internally I would recommend it, but yet more so externally; for though I would for many reasons not administer this medicine in general, yet here the present advantage should claim the only attention; as there is not a moment to lofe, but, like a fabric on fire, all dependence is on the immediate relief. ternal unjuries, to it mult?

happen

should

should constantly be impregnated with vegetable acescency, and like-wise with mercurial particles: To this purpose I have frequently ordered a hot poker to be put into a pan of vinegar; and that vapouring carried all about the room. I have also ordered the burning of fine sealing-wax, in which no minium has been intermixed. Besides, the room should not be too close, but admit as much fresh air as may be introduced with safety to the patient.

Having hitherto under this head treated only of topical medicines, I have barely confined myself to external inflammations. The same effects that injure the external parts, may undoubtedly affect the system within,

But, whilst nature has sheltered the nobler organs of life from external injuries, so it must needs happen,

happen, that the more remote the morbid affections that are hid from our inspection and immediate aid, they must threaten the more danger to the animal system; and admit only of that mode of affiftance, which can at best but operate slowly, comparatively with external applications. This I fhall confider under its separate head; and at present conclude this Differtation, not without hopes that it may prove of general advantage, as well to the judicious practitioner as the fuffering patients; being the only object I have in pursuit in the execution of my defign.

H 2 Of with which the cone of the cone.

Withheat walnt I have filed, that

The prefere resolution of the no-

dody second bus will as a configuration

Of Ulceration.

COME now to treat of that part of furgery, which has abounded with the groffest and most injurious errors. To enumerate, and to confute them (as far as is come to my observation) would require too much time for the compass of this little work; intended merely to point out the extensive medical virtues of mercury. I shall therefore let it suffice to give my sentiments on this particular, without dwelling on the principles of others; that the judicious practitioner may the more be left at liberty to think for himfelf.

I repeat what I have said, that the causes are the least worth attention with respect to the cure. The present condition of the malady, together with the constitution

or habit of the patient, is the principal object to be had in view. On that principle I shall endeavour to prove, that ulcers, whether from external violence or internal acrimony of habit; whether strumous, venereal, or scorbutic, it matters not; if they are similar in their situation and nature, the same medical applications will prove equally proper or improper, and the good and bad fuccess will be in all alike. Moreover, I infift on it, there is no difference in the various kinds of ulcers with respect to their action, except the difference of the parts where they are and their degrees of malignity. One medicine serves for them all; and that medicine is mercury.

Let us, however, proceed to a disquisition of this kind of malady.

In the preceding pages, we have inquired into the nature of inflam-H 3 mation,

mation, which, in fact, is the first spring of ulceration. For, as in all painful sensations in the animal occonomy, a sever is the symptomatic attendant, so likewise, from the same universal cause, a stimulus on the irritability of the nervous system must produce an inflammation adjacent to the injured or first stimulated parts.

A wound is an unnatural division of parts; but when the parts, from the painful separation of the stamina, become inslamed, and the discharge deviates the least from the first pure blood that gushed out from the divided tubuli, the wound changes more or less into an ulcer.

What fuppuration actually is, and how pus is formed, is an action of nature not so easily demonstrated as many have supposed. I am inclined

south circ

to think, it is brought about in the following manner.

The blood appears evidently composed of four different parts; 1st, the exhalation, or an alkaline volatility; 2d, the lymph; 3d, the gluten; and 4th, the red globules; the two last of which constitute the crassamentum.

All these parts, though they separate when a coagulation can take place, are nevertheless intimately united, and form an uniform fluid in the animal circulation.

Whilst, however, the circulating tubuli are of various magnitudes, the greatest number however so very small as to admit with difficulty the glutinous parts of the sanguineous mass, I conceive, that the parts, being divided in a wound or ulcer, must naturally be contracted; partly

from their natural elasticity, but principally by the inflammation from the pain of this separation; so that the officula of their divided tubuli cannot admit of a draining or effusion of the red globules, but barely of the exhaling, lymphatic, and gelatinous parts of the blood.

To this, however, we must add one material circumstance. In nature there is no stand; the combination of particles in the animal economy may be considered to be of two kinds, animate and inanimate; the first when linked in the chain of animalation; but the last when separate from that communication. To the first I reckon the officula of the divided tubuli, and to the last the pus which they exude in exulceration.

From this theory I deduce, that fince kind nature is for ever engaged to repair her deficiencies, the lips of the the commencing ulcer, by contracting the officula of their tubuli, not
only exude the gelatinous part of the
blood that chiefly constitutes pus,
but form new fibrillæ and new tubuli in the new carnation; which
must, from its minuteness, have a
glandulous texture, and contribute
to a pussy secretion, in proportion
to that kind of glandulous texture
which by suppuration is produced.

Thus I would account for exulceration that naturally must attend wounds, however benign, and is absolutely requisite to the union of parts.

But, whilst the different parts that are liable to be injured by violence are various in their texture, and the symptomatic affections likewise are liable to vary; add to this the peculiar habit of body, it follows, that ulcers must vary in their degrees of the H 5 malignity;

malignity; as well with respect to the bad conditioned pus, as the confused formation of the glandu-

lous fibrille.

From what I have faid, the various kinds of ulcers may be traced in their operation according to the reciprocal action of folids and fluids.

An ulcer is ever attended with inflammation. If this is ardent, the
humour in the inflamed part must
consequently in proportion acquire
an alkalescent acrimony, which not
only has a tendency to putrefaction,
but in a short time to become thin,
sanious, and setid, and by its virus
stimulate the sibres, whereby they are
excited to a spasmodic constriction;
consequently the inflammation increases, and that again gives new
virulence to the acrimonious ichor
of the ulcer.

Whilst now theinflammable parts, as well the part furrounding the ulcer, as the fungous substances within the ulcer itself, are liable to produce various fecretions, folutions, and formation of new matter, we may eafily deduce the various kinds.

Every unnatural division of parts, and every internal acrimony, that lacerates the minutest tubuli, will and must produce an ulcer; from the scratch of a pin, to the tearing away a limb; and from the least particle of the itch, to the confirmed lues venerea, or most inveterate cancer: stimulation of the nervous irritability commences, and continues exulceration in every degree.

When an ulcer suppurates well, the matter thick, white, and ropy, the inflammation flight, the carnation of rose colour, the lips foft, and cuticula coming all round the edge, H. 6: HOLLY

edge, then nature is in a fair way, and her repairing work goes on without disturbance.

in the ulcer itleif, are liable to pro-But when the fuppuration is partly suppressed, the lips thick and inflamed, irregular fungous fubstances formed, florid, black, livid, and variously hued, and the inflammation ardent all round, the ulcer is in a malignant state. The matter, being highly acrimonious, corrodes the found part, and, having a great share of alkalescency, putrefies, and becomes fætid; and frequently degenerates into animalcula of various kinds. And this constitutes the theory of sanious, phagedænic, fætid, and putrid ululcers.

When branches of veins and arteries direct their course through the ulcerated part, they must consequently share the malignity; hence, when

when the lacerated mouths of the blood vessels open into the ulcer, or that various parts are stimulated by the virus of the ulcer, they will contract in some parts, whilst in others the impetus of the blood will distend and make them varicous.

When the malignity of the ulcer corrodes the fofter parts, as the cellular or vasculous substance betwixt the muscles, &c. the ulcer must become finuous. When the granulation of the fleshy fibres increases in redundance, it must produce fungosities; when, however, those sibres become contracted, and less vascular, it must of course generate a callo-What I have faid of the changth

When that callofity attends the various cavities of the concealed ulcer, it is termed fistulous. When the bone itself is ulcerated it is termed carjous. Been delay proceed sugifica

method

And lastly, when the fibres of the parts are become indurated, variously deformed, the vessels varicous, the fibres themselves tumested, and the matter in a superlative degree malignant, the ulcer then is termed a cancer.

In this most terrible kind of ulcer I conceive the stamina of the sibres and tubuli to be deformed, and perverted from the order of nature into a malignant gland, that spreads its roots to every part in communication with the ulcer; and from this very cause makes the most obdurate of all ulcerating evils.

What I have said of the changes and disposition of ulcers in general, and what constitutes their various kinds, we see in fact is brought about in all, let them have what cause they will for their origin. I shall therefore without delay proceed to their method.

method of treatment, and be as concife and general as their nature will ever, there is any veneral laws

Mercury is the specific medicine in ulcerations of all degrees, of all denominations, of every part, in all constitutions, and from whatever cause; but whilst pharmacy has given us a choice and variety of its preparations, I shall point out in what cases the various kinds may be used to the best advantage.

The principal object is either to prevent or to assuage (or naturalize) the animal acrimony. An ulcer, therefore, without any fensible inflammation, whose bottom looks clean, whose edges or lips are soft, and the pus thick, white, and small in quantity, is in that benign state nature requires for its cure; here every thing stimulating should be avoided, that nature may proceed in peace.

peace. As to applications, dry lint might be sufficient; where, how-ever, there is any venereal or other acrimony to be suspected, a little cerate, intermixed with calomel, will prove a necessary addition, and prevent a generating of acrimony.

If, however, the ulcer is fungous, and the animalation of the glandulous substance too rapid, it indicates a concealed stimulus that excites this; and therefore more penetrating mercurials must be chosen. The levigated precipitate intermixed with some cerate, or linimentum arcai, will generally check this without affecting the sound part, bring the ulcer to a benign suppuration, and procure the wished-for effect.

But sometimes that sungosity is very obstinate; yet escharotics I do not approve of, at least not once in sive hundred times where they are made

made use of, especially with dry and unlevigated precipitate; which, in general, is a very injudicious practice.

A gentle aqueous folution of fublimate is the best I know of, and with this I have subdued the most obstinate excrescences, in ulcerating buboes, and inveterate shankers, when lunar caustic, dry precipitate, and other caustics have proved inesfectual after long pestering the patient, and baffling of the furgeon.

The same gentle method I have purfued with the wished-for success, when the lips round the ulcer have been callous; for in practice we are convinced, that whilst this induration is the case, the ulcer will not be benign enough for healing.

Inflammation is ever the greatest enemy an ulcer has to encounter with_

with. In irritable subjects emollient poultices have always the preference, especially when the pain and ardency are great, and the parts of delicate texture, and particularly in venereal and virulent cases; in leucophlegmatic scorbutic habits, and where there is a debility of parts, stimulants, provided they are antiseptic, will frequently be preferable; but in every kind of application, as I have before observed, mercury is the only antidote to be depended on.

In malignant ulcers from internal acrimony, attended with ardent inflammation, a poultice with mercury either triturated with honey or hog's lard, I have experienced with fuccess. Buboes, and scrophulous ulcerations, I have subdued by mercurial plaister kept continually on the tumesied parts, leaving an opening for the conveniency of dressing the ulcer

uleer according as circumstances required.

When an ulcer discharges a malignant phagedænic, and sætid sanies, it is plain that the carcinomatous excrescence in the ulcer must be equally ill-conditioned; for this if one should propose the aqua phagedænica made of sime-water 1 lb. and sublimate mercury half a dram, I have no other objection, than that the sime-water makes the solution too stimulant without a sufficient quantity of the mercurial particles to counterbalance the animal acrimony in the ulcer.

For my part I have found the bare solution of sublimate mercury in simple water to answer all my wished-for intention. Sometimes I have (and with great success) applied the composition of lime-water with calomel, particularly to cancerous

cerous ulcerations, which hath mitigated the malignant fætor und phagedænic acrimony of the fanies, and acted with equal good fuccess on the carcinomatous fungosity.

Cancers are by many supposed incurable: that they are not always fo I am certain, but that they fometimes are I believe; when the roots of this calamitous evil have spread themselves to the neighbouring glands; as is the case in a cancerous breast, spreading its malignity to the axillary glands, whence the whole mass of blood becomes contaminated, and proves at last the patient's destruction, particularly where nature is at the eve of taking leave of the animal acrimony, and decay of emaciated old age helps to fink the af-flicted patient into the cold arms of death troops him ben

HOTEL

In finuous ulcers, when the matter has found its way either into the vasculous parts between the muscles, or even the bone itself, more chirurgical skill is required than this small treatise will admit me to particularize. I have only to observe, that dilating the ulcers, or laying open the canals, is oftener done than tends to the good of the patient.

My method has been to inject my simple antacrid injection, that is, bare calomel and water, and apply compresses, where the situation would admit, provided no inflammation hindered it.

Dilation and tenting ulcers of that kind generally ferve to irritate the parts; and I have known fundry instances, that fistulous and callous ulcers have been produced barely by this management.

Under

Under this class of ulcers may be considered the scrophula. I shall not enter into particulars here; but the notion that the scrophula is incurable, is no more true in this, than any other kind of evil. I have mysfelf cured scrophulous evils that have been of seven, ten, and even above twelve years standing. And notwithstanding what has been said, that mercury is in those cases improper, I aver, that there is no case where that medicine is more proper, if judiciously made use of.

I have dealt with my scrophulous patients, as if they had had the confirmed lues venerea, and success has attended my presumption of having wandered from the high beaten path in this and many other respects.

The patient I have kept warm, fo as to promote a gentle pespiration, especially the tumesied part; internally

nally I have given, sometimes tur-pith mineral, sometimes my cathartic pills made of gamboge and calomel, and more frequently the spirituous folution; but constantly taking care to prevent or hinder the mercury from acting upon the falivary glands, or causing extraordinary evacuations. Externally, on the tumefied parts I have applied mercurial plaisters, and as large as were requifite.

The ulcers I have dreffed with ointments intermixed with levigated precipitate; the finuous and fiftulous canals and cavities I have injected sometimes with calomel and water, sometimes with a mixture of honey and crude mercury triturated and diluted with water, and sometimes with a gentle aqueous folution of fublimate mercury, as occasion required.

With

With respect to diet, I never restrained my scrophulous patients from any thing that suited their appetite and inclination; my only injunction (to all patients alike) is neither to eat the least against appetite, nor to disappoint it when hunger craves; but above all things, never to make a full meal; for nothing contributes more to a cure in every acrimonious distemper than temperance and spare diet; in which nature may be faid to husband the nutriment to the best advantage; -Nature, with all her amiable qualities, inclines a little to profligacy; and superabundance is apt to make her vicious, as well as her darling children, mankind.

Fiftulas do not always require to be laid open; it is feldom, very feldom, that the callofity will not yield to the antacrid cerate, the calomel, or mercurial folution.

I have

I have by this method succeeded in fistulas in ano, when it has been the general opinion, that nothing but a dangerous operation could give the patient any chance.

With respect to scorbutic ulceration, mercury has generally been deemed highly improper, both externally and internally; but that error has been originally founded on the improper use of mercury. I will very readily own, that the putrescent tendency of the scurvy enervates the whole system, insomuch that the tubuli are easily lacerated by their contained fluids; and in that case, much mercury will do much mischief. But is there no other method of giving mercury than to excess?

As I have plowed the ocean in the various climates of the world, I have only to observe, that the greatest benefit

benefit I have done to my scorbutic patients has always been by mercury. I don't pretend to say, that nothing else is beneficial. To counteract the animal putrescency, and to give tone to the emaciated fibres by the antiseptic quality of vegetable acid, and to neutralise the animal economy by the prudent use of mercury, is the most successful method that can be taken in the scurvy; and which by success I am authorized to recommend.

I have one class of ulcers more to mention, and that is, an exulceration of the bone itself. The bone, though the hardest part of the human body, is nevertheless liable to as many various changes as the slessified integration it appears to be more delicate; but if we reslect into the matter a little deeper, we shall soon perceive that that delicacy consists barely in the

the flow circulation that happens in the fubstance of the bone.

Whilst the parts are foster, the circulation and change is quicker in the fofter parts than in the harder, the ulceration, fuppuration, absorption, and replenishing are of course quicker. And therefore, any injury done to the substance of the bone must be more tedious in shifting from the decayed part, be it ever to finall. Add to this, that the bone lies more covered from the difcharge.

This observation I shall apply to exfoliation, where the greatest judgment confifts in waiting with patience till nature has covered the found bone with a new periostæum, when then the scale loosens, and may be with advantage taken away. But if this explication is hurried too quickly by bone-scraping or other

incom-

inconsistent means, the formation of the new periostæum is disturbed, and the exsoliation not only continued, but the whole bone rendered carious. Thus I have known instances where an ulcer of this kind has cost a limb, and that again life of the patient.

There is something characteristical in an ulcer, that discovers a foul and carious bone at the bottom. The matter is generally difagreeably thick and fœtid, and the fungofity grows very fast and spungy. The best application that I have found is the folution of fublimate mercury; not only to the fungosity, but on the black carious part of the bone itself. That, together with the antacrid cerate, the antacrid injection, and patience till the scale is loose and fit for extirpation, will always succeed better than meddling impatience, and shew of fine polished scraping tools.

To

To conclude: in every kind of ulceration, from whatever cause, and in whatever habit, the prudent use of mercurial applications is only to be depended upon, in order to assuage acrimony, and to enable nature to restore the part to a perfect state of health.

13

Of

Of Internal Diseases.

THE subject before us is of a nature much more delicate than that we left. In external disorders we receive guidance of judgment from inspecting the diseased part itself; but in internal morbid affections we are, notwithstanding our extensive theory, and the certainty of symptoms attending diseases, left too much in the dark to prognosticate, with absolute certainty, of the success in the intended cure, without the assistance of that most faithful guide, experience.

Before I proceed to particulars, I shall make some observations on the animal economy, which, added to those made before respecting the causes and effects of the morbid operations, will farther elucidate the Proteus-like transformations, which diseases

diseases in general are subject to; in order the better to enable us to establish a permanent rationale in a curative indication.

Besides the incessant exchange of air by the inspirating and exspirating actions of the lungs, whilst they, as ventilators in the animal œconomy, receive a portion of air from the atmosphere, which, by the returning pulmonary vein, they distribute to the whole mas of blood, and again extract, in alternate fuccession, a portion of decayed air from the fanguineous mass by the pulmonary artery, and expel by exspiration; befides this, I fay, there is another kind of exchange of air, which extends over the whole furface of the body, and is performed by the pores of the fkin.

This alternate absorption of the circumambient air, and exuding of the

fluid attending transpiration, is augmented, as well as the ordinary exchange from the respiration of the lungs, by an accelerated circulation of the fluids, from whatever cause it may be excited; and on the due performance of this exchange of air depends more, with respect to the preservation, or restoring of health, than in general is adverted to in physical observations.

In the second place we should take notice, that, besides the ordinary course of the circulation of the sluids, there is another kind of special circulation, independent of the main sanguinary course, namely, from the internal to the external parts, and vice versa; as also between the various viscera that are interspersed through the whole sabric, at whatever distance they may appear to be separated, insomuch, that their sympto-

fymptomatic correspondence depends not only on the nervous consent, but on actual exchange of fluids.

Though daily experience confirms fuch a retrograde and alternate transfusion to exist throughout the whole system, and to act promiscuously between the various parts; yet we observe it most conspicuously between the different parts in the system corresponding with the alimentary canal. And it is here we discover operations in the animal economy, wonderful indeed, if attended to only in the state of health, and of the utmost consequence in pathological enquiries.

Besides the various channels directly forwards in the system, through which the aliments undergo the different operations of digestion, chylefaction, sanguisication, and the glandular secerning of the particular nutriments,

1 5

in order to renew the various stamina constituting the whole; a returning or retrogradation takes place from the various parts to the internal canal again, by which are sent back, not only the decayed humours but even the worn off stamina themselves, which are afterwards intermixed with the dregs of the drained aliment, and then discharged from the system as excremental seces.

These observations might lead us here to make many more, which however the intended conciseness of this little treatise will not admit of. I mean only to lead my reader into a chain of reslections, by which he may dive into the animal economy, and trace the transposition of diseases, as also their similitude, how opposite soever they may seem to external observation, or whatever disferences may arise from the parts affected.

Without

Without farther delay, therefore, I shall proceed to the various classes of difeases and their treatment refpecting the administration of mercury; as far as has come under my observation, and I have been happy enough to experience with fuccess.

Interest de le le la contraction de la contracti

here diffiguilles derers and octioned

when he we constitute the state of the first of

Denis female divisionalizate sive sixte

England Control with the state of the control of

the same than fail at another than the

The state of being anomalis

and a to the of said for another labori

siele sia "scottesthel svitation i

was in the state of the factor of the contract of the contract

Of Fevers.

problem & Cambridge Children W

So great is this sphere of diseases, as indeed to comprehend within its boundaries every other malady in the animal state, attended with painful sensations.

In regard to their origin, I shall here distinguish fevers into three different kinds; namely, symptomatical; from vitiated humours; and from contagion.

This simple division may give rise to innumerable subdivisions of each class, and produce a list most dreadful to behold; but if we divest ourselves of prejudice, and examine into the morbisic operations of fevers, we shall clearly find, that the requisite distinctions of that class of diseases, with respect to their effects and curative indications, are but very

very few; and those few distinctions depending the least on the first cause, but principally on the constitution, and the actual state of symptoms the patient is found in, when medical aid is administered.

Fevers of the symptomatic kind I reckon those arising from a painful nervous sensation, communicated to the nervous system in general by fome injured external or internal part; and which thereby becomes the proximate cause of the fever.

Vitiated fluids may arise from some natural default in the structure of particular parts in the fystem; from a depraved way of life, from obstructions in the secreting organs, from inflammations, ulcers, &c. whence, as vitiated humours will naturally irritate the nervous fibrillæ, a fever will consequently ensue.

Contagion,

Contagion, however, is of various kinds, and liable to contaminate the fystem, either by a miasmatic atmosphere, or by a close contact of parts with a person already insected.

But these distinctions relate merely to the first rise of a fever; for whether the nervous system is first disturbed by a sympathetic painful fensation of a particular diseased part, or whether irritated by a vitiated fluid, or, de novo, by fome poisonous particles, whether an animal acrimony or fome other offensive miafmata, it matters very little with respect to the disturbance in the animal œconomy; the morbific operations depend upon the constitution, and a thousand other circumstances, which subject the patient to the same dreadful symptoms and the same dangerous consequences, let the inflammatory fire of a fever be kindled which way it will; and the curative indication

indication must be adapted, not to first causes, but to the constitution of the patient and the present state of the difease.

The fum and fubstance of all fevers is a painful irritation in the neryous fystem, whence the circulating mechanism is excited to act with a preternatural force on the fluids, and thereby render them obnoxious to the fecreting organs; thence confufion and disturbance in the animal œconomy must naturally arise, which threaten destruction to health and life itself.

I would not by this be understood to difregard the real distinctions of fevers, as nothing is more effential to form the judicious physician; but beg leave only to observe, that those who from fuch distinctions have adapted remedies peculiar to the primary causes, have led themselves and

and their credulous readers into errors that have proved highly dangerous in practice.

In fevers of whatever kind, three points should be had in view, namely, to relax the constricted fibres, to correct acrimony, and to guard against obstructions. To accomplish these, is in fact all the benefit which medicines can effect; for, with respect to the evacuation of acrimony from the fystem, that is intirely the operation of nature, and depends upon the regularity with which the various organs perform their functions. We may indeed produce various evacuations, and lessen thereby the system; but if we, by fuch artificial evacuations, mean to force away the annoying acrimony, perhaps we shall find too late, that we are mistaken in the attempt, by increasing the evil we wish to remedy.

To effect those principal indications, namely, to relax the spasmodic constriction of the nervous fibrillæ, to prevent obstructions, and to correct acrimony (which last indeed implies all) it is expedient to administer such a medicine as is not only capable of effecting fuch correction, but of penetration enough to enter into the stamina that compose the various parts; as it is there we must fearch for the operation of diseases in general; for it is on the fabrication of the blood its purity depends; and the fabrication of the blood and various fluids must needs depend upon the disposition of the stamina, that constitute the mechanical organs.

This antispasmodic, deobstruent, and universally antacrid medicine, is mercury; which from those qualities, and the minute divisibility of its particles, capable to enter even the

the very corpuscles of the stamina in the system, ought to constitute the basis of all medicines intended to eradicate every acrimonious obnoxiousness that disturbs the animal frame, and hinders the enjoyment of health.

The sooner, therefore, mercury is administered in severs, let their symptoms be of whatever tendency, or how malignant soever, the more success may be expected. But as so many circumstances attend severs in general, and as the administration of mercury depends upon those circumstances, and the present habit of the patient, it will be expedient to take a view of the various kinds of severs, as far as their attendant maladies and morbific operations are characteristically different, and require particular treatment.

de villiante dividillity of

dels

First then I shall treat of symptomatic fevers, including that kind which arises from a painful sensation of some disordered part of the body, external or internal, by whatever cause the pain is produced.

This kind of fever commences with a spasmodic affection in the nervous fystem, and thereby diforders the whole animal œconomy; but disturbs most fuch particular parts as are in the closest sympathetic nervous consent with the primary cause, or where accidental occurrences in the animal occonomy are apt to add to the nervous irritability.

Hence, besides an accelerated pulsation of the fanguineous mechanism, a head-ach, difficulty of breathing, nausea at the stomach; but more especially a weariness, lassitude, and obstruction of perspiration

tion of the furface of the body, attend this disturbance in the nervous system.

Besides attending to the primary cause of the sever, the intention must be bent to relax the constricted sibres, and to promote perspiration; not only with a design to clear the system from the acrimony by transpiration, but to establish the necessary exchange of air of the external surface, one of the most necessary functions whereon health depends.

In all kinds of fevers, where a full and quick pulse appears to indicate a plethora, bleeding is the first remedy generally applied. This evacuation is, indeed, capable to relax the general tone of the whole system (and consequently the spasmodic affection of the nerves) by reducing the force of the whole, and taking away a part of what life itself depends

pends on; but if we more strictly examine into the animal occonomy, what passes, or what is apt to come to pass in the system after bleeding, we shall find that this operation is of the utmost consequence, especially in severs, and ought to be performed with the greatest caution imaginable.

When a patient is of a plethoric and rigid-fibred constitution, and suddenly attacked with a spasmodic affection, that disorders the whole frame with a violent agitation, bleeding, indeed, is expedient in order to procure a temporary relaxation of the whole system, whereby the tone of the fibres may become debilitated, and incapable to act with the ardency threatened. But in the generality of constitutions, and affections of severs, nothing is more hazardous than this kind of evacuation; and more particularly, when

the morbific operation of a fever has already affected the mass of blood, which it very speedily is apt to do.

The spasmodic affection, which is the immediate agent of a fever, although it accelerates circulation, attenuates the fluids, rarefies them, and thence extends the larger veffels, yet this very spasmodic affection by intervals constricts the smaller tubuli. fo as to render them unable to transmit the fluids according to their fecreting functions; hence a fever is ever attended with a struggle in the finer fecretory organs, but more efpecially on the furface of the body, which is ordained from its mechanism to be the instrument of univerfal perspiration, and where the animal œconomy is for ever endeavouring to discharge every acrimony. Such at least is the natural effect of circulation.

Although

Although now bleeding leffens the fanguineous mass, and seems to deplete the vessels of a superabundance, consequently relaxes the distended fibres; yet whilst the larger vessels only are thereby emptied, they are not only lessened in their impetus and necessary effort towards transpiration, but actually become engaged in abforbing from the minuter tubuli on the external furface. or some of the secreting viscera, that portion of acrimony which nature intended to throw off by perspiration, or other evacuations. Hence not only a retrograde transposition of fluids is apt to take place, by which the whole system is disturbed a new, and the whole mass of blood again infected by its own acrimony; but even the vis vitæ is leffened, the blood impoverished in its crassamentum, and the tone of the moving fibres debilitated, the pillars on which

which the animal functions in general are supported.

Hence we may trace the reason why blood-letting is so very seldom attended with that success in severs as it seems to promise in general practice; nay, on the contrary, why it too often renews the sever with double ardour, plunges patients from the slightest illness into the most tedious diseases, ruins their constitution irrecoverably, and often hurries them with precipitation to the grave.

The first indication of spasmodic affection should tend to relax the nervous system, not so far as to debilitate the nervous tone, but assuage the acrimonious irritability, which is the morbisic stimulus that excites the preternatural constriction. Nature to this intent is immediately engaged to effect a perspiration, which

which is evident from the natural chills and flushes of heat, attended with lassitude and irksome weariness, which the patient is very sensible of till perspiration, a temporary relaxation, produces an agreeable interval of ease. To promote this natural effort is indeed greatly in the power of art; but here again, physic has been led into errors equally pernicious with the imprudent practice of bleeding, by stimulating sudorifies, which have only proved in general additional suel to the febrile sire.

As far as warm, diluting, copious draughts, and a moderate warmth of body, will affift this falutary effort of perspiration, it is laudable to affift nature; but even this requires caution, and depends upon circumstances for its success. But to introduce into the system an antacrid medicine, that, as an universal anti-dote, shall attack the acrimony whe-

ther it be engrafted in the solid stamina or wandering in the circulating sluids, is that aid by which art has even the advantage over the efforts of nature; as it enables the animal accomomy to perform what would be dangerous for evacuant medicines to attempt.

The antispasmodic powder of the celebrated Stahl, confisting of cinnabar and purified nitre, has proved a most beneficial temperant in all kinds of fevers arising from painful and spasmodic affection, the virtue of this medicine depending on the antispasmodic quality of the cinnabar, and the gentle perspirative qualities of the nitre; but although the cinnabar is actually endued with a medical quality of relaxing a nervous constriction (notwithstanding this is by some denied on a supposition of the strict union of its component parts) yet as this fedative quality,

quality, I am apti to believe, acts barely on the nerves in the prima vie, and is not capable of penetrating throughout the system; I have, with the most wished-for success, added calonel to that composition, and from long experience beg leave here to recommend:

composition, iXI if Noc requisite to

19 Cinnabar factit. 3 ii. ad 3 iiii.

sult Ov. cancre ana 3 i.omitagi oldera

Mer. dute: sexies sublimati, pp. gr. xx. vel xxiv.

M. f. pulo. dividend in xxiv partes ent of aqualess od

the fystem; however, This powder may with fafety and fuccess be given in all fevers of the inflammatory type, arising from a spannodic affection. The doses should, however, be proportioned to the age, constitution of the patient, and the ardency of the fever, whether the cause of the spasmodic af-

K 2

fection

fection confists in an external injury, or depends on an inflammation in some of the internal viscera, or elsewhere in the system.

with the most wished for fuedele. But as the virtue of this medicine depends materially on the proportion of its separate ingredients in the composition, it will be requisite to mention, that the cinnabar should be increased in proportion to the irritable spasmodic affection in the system, the nitre in proportion to the necessity of producing a perspiration, and the proportion of the calomel should be adapted to the acrimony in the system; however, with this limitation, never to attack the falivary glands, which fometimes two or three grains, given within 24 hours, will affect, unless some other evacuation interferes. And, to speak my real fentiments, more depends in spasmodic affections on correcting the depraved state of the fluids noift of

by the judicious management of calomel, or any other equivalent mercurial preparation, in the most ardent and inflammatory fever, than the rest of the ingredients in the composition, or even any other medicine, whatever antiphlogistic, antifpasmodic, or diaphoretic qualities they may be supposed to possess. For the fact is, that most medicines, efpecially those that come under the denomination of febrifuges, point blank contradict, in the administration of them, the many virtues placed to their accounts.

I have, even to my own aftonishment, experienced the most wished-for success, in symptomatic severs arising from partial inflammations, by administering the simple compo-fition of the pills, N° III. without any other medical aid; for if we can but correct or prevent the animal acrimony in the system, which is

K 3

the

the disturbing enemy, nature will soon with gratitude perform her various functions, and crown our aid with success; and whoever can divest themselves so much of prejudice, as to attend seriously to the salutary maxim, not to force but to aid nature, which, from experience and attentive observation, I can vouch to be built on sact, will at least, as the friend to his patients, dispose the animal economy to a speedy restoration, without hazarding their conditution, or life itself.

What I have said relating to symptomatic severs in general respects only the spasmodic affection of the nerves universally in the whole system; but so different is the nervous confent between different parts, and so rarious are the different operations in the animal occonomy, and alternately changed, that this universal affection is very seldom the case, or

nancy in some one or more special part, either depending on some peculiar nervous irritability or on some casual congestion, or retrograde circulation. Whence arises more pain in one part than in another, or a a metastasis of the peccant matter, or inflammatory acrimony ensues, according to the nervous consent, or revulsive congestion of humours.

Now if we maturely reflect what is apt to come to pass when nature, by her evacuating efforts, expels the morbid malignity upon some external part of the body, namely, a partial inflammation, eruption, or exulceration; we may easily from thence deduce what most assuredly will be the case, when the morbid malignity is thrown upon some particular viscus within the system, namely, inflammation and its various destructive consequences. And

K 4

11

if we draw an analogy from the experienced fuccess of an external topic, have we not reason to believe, that the same indication should be had in view; namely, to correct the animal acrimony, by what methods soever it is possible to operate upon it?

Upon those principles I hope here to offer some peculiar remedies, which, however strange they may appear to common practice, will nevertheless, I am assured, meet with the approbation of the impartial judicious, and especially those who convince themselves of their virtues by actual experience.

Inflammatory fevers are always in their nature of the most dangerous tendency; it is not only the part that is the primitive seat of the malignity, but the whole system that is subject to fall a facrifice to the inflammation.

flammation, and its spreading consequences.

We shall not inquire here, whether the sensitiveness of the stomach, and the immediate correspondence of that viscus with the whole nervous fystem, is from an innate design in the animal structure ordained to receive the first sympathetic sensation, or painful intelligence of the difturbances in the fabric; or whether the stomach is endued with that quality in order to become a cooperating agent, to affift the evacuating faculties in expelling the animal acrimony, or whether its peculiar sensitiveness is effential to its structure, or derives its sympathetic irritability from accidental correspondence; certain however it is, that if there be any confiderable pain in the system, whereby the nerves are roused into commotion, the stomach is immediately apprised

K 5

of it by fick fensations, and sooner than any other of the viscera refuses. to continue its functions, and is liable to be irritated to the most violent convultive motions. This symptomatic affection of the stomach, although it contributes greatly to the patient's affliction, though it is liable to prevent the peristaltic motion, and helps to deprave the fluids; yet: has it notwithstanding its good effects towards affifting the evacuating functions; especially in facilitating perspiration, the most salutary outlet nature has to disburden herself of any uneafy load.

But besides the universal exertion of elasticity throughout all the sibres, even so as to force a passage through the constipated tubuli in the perspirating mechanism, which the perturbation in the stomach occasions, and which may on some accounts be considered as an advantageous natural

tural aid; it affords an aid to medical means, and, if they are used with discretion, facilitates a relief which indeed we would wish to give, but by no other means could give in the same short time it is requisite to be done; namely, to force mercury into the system by an emetic operation.

I shall not here pretend to inquire into the virtues of antimonial medicines. The truth is, I do not as yet fully comprehend on what principles they operate in the animal economy, though I have diligently inquired into the nature of antimony, as far as chemistry and observation upon the practice of others would extend; by the first, it appears very undetermined as to its intrinsic virtue, and subject to alterations even by the common air; by the latter, very uncertain in regard to its ascrib-ed medical qualities. This, how-K 6 ever.

ever, is not the case with mercury, either as to its degree of strength or operation in the animal economy.

Antimony may be admitted either as an emetic or diaphoretic, even by one and the fame dose of the medicine, according as that dose is proportioned to the state and irritability of the stomach; and it may probably have some antacrid qualities, as a metallic medicine; but mercury has this quality most certainly; besides, that it may by properly proportioning the quantity be given either as an emetic, or a diaphoretic, and thereby assist a falutary perspiration.

When the inflammatory symptoms are of greater ardency than the antispasmodic powders, together with a suitable regimen, are able to subdue; or, what is more apt to be the case, when the fever has either not been

been properly treated in its first onfet, or totally neglected, it will be requisite to apply to such other methods as the malady may indicate.

The most frequent accompanying symptom in all ardent painful senfations of the nerves, is a nausea and vomiting; when this is the case, nothing is so seasonable as proper emetics in all kinds of fevers whatever, and more especially in their early commencement; for, besides; that it dislodges the crudities from the primæ viæ, and forces, as it were, a perspiration, we may seize the opportunity of impregnating the fystem with as much mercury as will lay a permanent foundation for a speedy restoration of health.

It requires judgment, however, to make choice of the emetic; but, what kind foever it be, mercury should always make part of the composition,

position, and that too should be chosen according to the constitution and ardency of the symptoms. Athletic constitutions and in the acme of life are both rigid and irritable, which subjects them the more to acute spasms in inflammatory affections; and in fuch habits we have frequent instances, that antimonial emetics have added an inflammation of the stomach to that of the whole fystem; on the other hand, delicate female constitutions are frequently endued with great irritability, together with a peculiar flaccidity; and, in constitutions like these, we have instances, that antimonial emetics have, after a violent operation, totally debilitated the elastic tone of the fibres.

Ipecacuana and calomel make an easy and safe vomit; and may be administered to the most irritable constitution, whether robust or delicate,

licate, labouring under the most acute fever . sonital soll soils

and recover their natural tone. But is opium charms the dring it the Be Specac. 3 in vel gr. XXV.d sovien Syr. balfam. & aq. alex, ana 3 Is. M. f. hauft. emet. 10 101091

In robust constitutions, however, of rigid fibres, but less irritability, or where there is a leucophlegmatic tendency in the fystem, the turbith mineral may be substituted instead of the calomel, and especially if there are obstructions in some particular viscera; and to promote the operation nothing, in my humble opinion, exceeds luke-warm water, without any addition of the china

After the operation of the vomit, a nervine and hypnotic draught is frequently very requifite, in order to footh .

property and the same

footh the agitated nerves into peace, that the strained sibres may recoil and recover their natural tone. But as opium charms the irritability of the nerves by a narcotic quality, it ought always to be corrected by a calefacient nervine, together with a corrector of acrimony, by which it is rendered the more safe and successful. On these principles I offer the following experienced anodyne effence.

tendency in the X . Man.

& Opii colat. drachm. tres.

Spir vin tect. } fing unc. duas.

Ol. menth. pip. drachen. unam.

Merc. fubl. corr. gr. quinque.

deinde adde cætera probe mifcens.

A ter the operation of the vomit.

Of this anodyne effence may, as occasion requires, to or 12 drops be given

THE OF MERCURY SHIT TOOK

given in any convenient vehicle, acol cording to art and beniard and and recover their natural tones and recover their natural tones.

When a metastasis of inflammatory symptoms affects the head, the case is of a dangerous nature, and it is here the most unprejudiced judgment is requisite.

Although there is no case, which, according to the common mode of practice, seems more to indicate bleeding, or where this operation is oftner applied to, yet I must declare there is no time when it ought to be done with more caution, and where it has proved more mischievous. For the truth of this I appeal to a candid examination into the journals of diseases.

I very readily own, that there are cases where absolute necessity calls for an immediate reduction of the system, and where a temporary diminution

minution is requisite, in order to prevent a total destruction of the vital powers; but fuch instances feldom occur, though some such may be, owing to uncommon, violent, and fudden accidents. But in these very cases, if we calmly confult experience more than the authority of custom, or pay the least ferious attention to the laws of circulation, we shall neither find the approbation of success, or the sanction of anatomy, to declare any thing in favour of bleeding of the temporal arteries or jugular veins, either with leeches or lancet, in preference to the opening any other veins in the system. But besides that fuch kind of bleeding favours of the ancient absurdity of opening particular veins in particular diforders, the inflammatory irritation, especially on opening the arteries, is even liable to increase the very -ib vinteame a madwhat devil.

evil for which the operations are undertaken.

Blisters too may, indeed, have their benefits; but when applied to the head of the delirious patient, in irritable and inflammatory cases, they tend more to drive the poor patient raving mad (as the effect has too often proved) than to produce any falutary effect.

Inflammatory affections in the various parts of the meninges, or the different organical parts of the brains themselves, act exactly upon the same morbific principles as the inflammations of any other part; with this difference, that as organs of the sensorium the morbid effect is more virulent and dangerous to the fyftem. It follows, therefore, that the same indication of cure must, as in all other like cases, take place; namely, to correct the acrimony in the most

most eligible manner that unprejudiced reason offers to our medical assistance.

To this purpose apply, as auxiliary aids to the methods already pointed at (instead of opening the temporal arteries with the lancet, or bleeding by leeches, or the application of blifters) mercurial plaisters to the temples, the wrists, and, if necessity requires it, all over the head. I am well aware, that the proposal of a method fo very different from common practice will startle many; but if reason may be allowed to predominate over prejudice, the wonder will soon cease, and experience (my voucher) will crown a judicious trial with fuccess. For my own part, I have been successful enough to quell the most violent frenzy, and even a raving mania, by this application, when all medical aids in the established way, as well Sheet

well as life itself, had been despaired of; and am happy to have fo powerful a remedy to recommend, in fo melancholy a circumstance.

Warm pediluvia are frequently applied also, in affections of the head, in order to produce a revulsion; but they seldom have the defired effect. A foot-bath, however, of cold water, defigned to act as an antispasmodic (or relaxer of the constricted nerves) has sometimes produced immediate and wonderful relief, not only to the afflicted head, but in pleurifies, iliac passions, furor uterinus, and especially in the most spasmodic ischuria. And this special cold bath, though simple, affords us a most speedy temporary remedy in all fpasmodic inflammatory affections; but requires judgment in the application, and, if judiciously applied, will not only anfwer all the effects of blood-letting, but

but prevent the innumerable ill confequences which the imprudent use of bleeding makes a patient liable to.

What has been advanced relating to inflammatory affections in the head, is equally applicable to the fame morbid cases in the various viscera in the thorax and abdomen. A pleurify and peripneumony, vera or spuria, differ only with respect to the parts that suffer; and, indeed, in the consequences that are liable to ensue; but, with respect to the indication of the cure, the method must be the same.

Many in such diseases (besides those sent into suture life) have been bled into consumptions or dropsies; I must therefore continue to warn the practitioners against this delusive ignis satuus of imaginary relief, if he has any friendship for the patient, whose

whose fummum bonum in this life is committed to his charge. The antispasmodic powders, emetics, gentle diaphoretic medicines, consisting principally of copious diluting draughts, low and antiphlogistic medicines and regimen, emollient or difcutient topical application, and lastly, the mercurial plaister applied as near as possible to the inflamed part; add to all these occasional cold pediluvia, as discretion and judgment may direct. These, I say, are in my opinion not only the fafest, but the most fuccessful methods an unprejudiced and experienced physician can take, in order to become serviceable in restoring a patient to his original health and constitution.

Much more might with propriety be said on inflammatory and spas-modic affections; but as these aphoriftical observations are intended for the benefit of the judicious practitioner, it is presumed they will be found

found sufficient, as hints intended for the improvement of physic, so far as relates to the many benefits of mercurial preparations in these and the like cases.

In the next place we will take a cursory view of fevers arising from a depraved mass of blood, and consequent vitiation of the various secreted fluids.

Whether they arise from a spasmodic affection (as inevitably must be the consequence, if the disturbances of the nervous system are not immediately quelled) or from other causes before hinted at; severs of this species may be distinguished into two classes, namely, acrimonious, and pituitous; though, in a strict sense, acrimony may imply the whole; but with respect to the state of the blood, and the nerves, a material

floner, it is prefumed th

barroi

terial alteration is requifite in the indication of the cure. I amoliave all his

To the first class in this division, namely, acrimonious fevers, I reckon those febrile morbid operations in the system, that tend to an alkalescent solution of the fluids, and destroy the tone of the system by their animal putrescent stimulus; let the first cause be symptomatic; or, de novo in the system; or from contagion; namely, all ardent, acute, continual fevers, eruptive fevers, malignant putrid fevers, hectics, and confumptions. a faltitury eyactration expels the acri-

The fecond class includes all kinds of intermittent fevers, and chronical distempers; and these, although acrimony is the basis, depend upon a viscidity of fluids, and a periodical flaccidity of a debilitated nervous tone in the fystem, and become paroxysmatical from the debilitation

and

and thereon depending obstructions in the various secreting viscera.

With respect to acute fevers, let them be of what kind foever, they will, on close examination, appear the continuation of those we have already treated of; with this difference only, that, according to their duration, the fluids must increase in acrimony, whilft the nervous fystem, being perpetually acted upon, must lose the proper tone, though it may retain, or perhaps increase as well as the fluids in, an acrimonious irrita-bility; till either a natural effort of a falutary evacuation expels the acrimony, by an eruption on the furface, sweat, stool, or urine; or the acrimony is affuaged by art; or the system is cleared of it, by the efforts of nature properly aided and affisted by art; or else nature finks under the unfuccessful struggle. All therefore that I have to observe is built

on those principles that the tenor of the above indication points out; which has ever been attended with fuccess in my practice, and which I recommend as a method that will equally crown the endeavours of the practitioner, who with judgment guides its course.

over of builting side of silver Something, however, occurs to me, that I think requisite and of moment here to be taken notice of; and that is, in the case of a bilious, or what is called the yellow fever, in the hotter climates; in which bleeding may almost be esteemed mortal, although, from custom, this operation is become the first recourse as a physical law, in the West Indies, notwithstanding death, immediately after the operation, almost visibly seizes the patient, and in two or three days carries him off. OFFICE THE TOTAL AND THE REPORT OF THE PARTY OF THE PARTY

violeidin

On the contrary, however, if mercurial emetics are immediately applied to, and repeated as long as the bile continues to be evacuated, and the yellow tinge of the furface remains, together with the ardency of the fever, it may be faid, as an almost certainty, that the patient recovers. By this method I have had an opportunity of distinguishing myself with singular success in this fort of putrid fever, and therefore think it my duty to point at it particularly.

With respect to the pituitous kind of fevers, since their morbid operations depend not only on the acrimony in the system (which indeed is the seed of all diseases) but on a viscidity of the sluids, together with a flaccidity of the fibrillæ in the minima vasula, that occasions an obstruction in its nature different from a spassic stricture in the secretory or excretory

excretory organs, and by which the febrile exacerbations become intermittent; it naturally must follow, that the curative indication must tend towards bracing the tone, not only of the folids, but of the crassamentous fibrillæ (if I may be allowed the term) in the circulated and obstructed fluids themselves; together with fuch medicaments as act immediately on the animal acrimony, on a principle of correcting them.

Whilst the continual inflammatory ardency actuates the fystem greatly beyond the natural type of circulation in the fanguinary mechanism, these fevers only attack the system in such exacerbations intermittently, and lower the elastic tone of the vascular and nervous fabric in the intervals of the paroxysms, to fuch a state of languid flaccidity as renders the circulation not only

L 3

in a state much beneath the natural impetus requisite for the natural support of animal functions, but impairs both body and mind in its wonted strength, so as to insuse, in the whole animal economy, an irksome and leucophlegmatic lassitude.

Hence it appears, almost to a demonstration, that the acrimony which affects the system in the intermittent paroxysms lies concealed, or shut up as inactive, in some viscera, till a periodical turn of circulation acting more forcibly upon such obstructed viscera, sets the imprisoned acrimony loose, to spend its sury on the whole fabric; then it sirst attacks the system with the usual symptomatic affections, attending all nervous disturbances, namely, a rigid chill and a succeeding violent agitation of burning heat, till at length the successive repeated impulses

pulses force a copious sweat, by which part of the acrimony is evacuated, but the rest, and perhaps the greater part, is gradually obstructed, and the system is lowered down in languor below the state it was in before this fevere morbid fcourging.

We will not stop here to inquire what viscera are most subject to become the prisons of this acrimony, or what arguments may be advanced in favour of this hypothesis, as we might perhaps be led too far from the object now in view; but let us barely attend to absolute facts, and they will lead us immediately to a fuccessful indication of cure, in proportion to the constitution of the patient and the present state of the disease, when our aid is called in.

Because now a pituitous sever of the intermittent kind acts in two different L 4

different kinds of affection, namely, below, and above, the natural standard of the animal action requisite in the state of health in the same constitution; it follows that our indication must be guided by those irregularities, in order to annihilate the cause of this morbid effect. Therefore, when nature is becalmed with a debility in the animal functions, when the fibres are too flaccid to act with a sufficient elasticity on the fluids, when the impoverished fluid, divested of its fulphureous alkalefcency, is too insipid to excite the fibres to action, and lastly, when forme particular parts are loaded with a debilitating obstruction; it becomes necessary to spur the functions along, and endue them with fuch abilities by art as they are deprived of by the difeafe. our aid is calle. slashin

But on the other hand, when the imprisoned acrimony is let loose to rage

rage like a furious storm in the syftem, when the nerves are irritated with violence, it behoves us to throw a prudent damp on the ardent virulency, and at the same time gently to aid nature, that she may not be disappointed in a salutary crisis of the paroxysm.

Brand of As Distance Com The Peruvian bark is on all hands, and with much justness, allowed to be a powerful bracer of the debilitated tone of the animal fibres; but for many reasons, here too tedious to mention and explain, I cannot approve of it in substance, except perhaps in the most robust subjects; although its neat extract, and the tincture, I hold in the highest esteem. But let us begin at the root of the evil.

When an intermittent fever (or ague as it is generally, though rather improperly, termed) is con-L 5 firmed;

firmed, of whatever denomination, which a judicious physician will soon be convinced of, let a vomit be the first step; and especially at the approach of the paroxylm, or rather when a nausea indicates its exhibition. Though emetic tartar is here beneficial, or the emetic wine, yet the turpith mineral, or if this is too drastic, the afore-mentioned N° X. will be greatly superior, for reasons already mentioned; and at the end of the operation, let the patient be treated according to the principles already recommended.

In the intermediate time, when the body feels a painful lassitude, the mind is dejected, and a debility is discovered in the whole system, together with other symptoms; astringent medicines, together with grateful nervines combined with mercury (the universal antacrid) will soon effect what the patient ardently wishes wishes for, and his friendly physician endeavours to accomplish. To this intent, I shall here recommend. a tincture, which with me is a favourite medicine in all nervous debilities, and justly merits the appellation of a febrifuge.

No XII set to his mo

R. Tinct. cort. peruv. spirit. 3 iii. Ol. menth. pip. effent. 3 is. Merc. sublim. corrosiv. gr. ii. M. f. a.

Of this may be given 3 ii. at a dose (more or less according to the constitution) either made up with the fyr. croci, or in a glass of wine, and repeated three or four times in the day. If the habit is very leucophlegmatic, sal martis will prove an excellent deobstruent and bracer of the nervous system, the discretionary use of which I leave to the judicious practitioner.

1. 6

Laftly,

Lastly, I shall make some observations on contagious or epidemic distempers; and here it is, where mercury is the most beneficial, although in this instance it is most neglected.

If we call in natural philosophy to our aid of reasoning (which by the bye should be the basis of physic) we shall hardly have any doubt left, that at least most kinds of contagions confift in animalcula, if not all; but fuppose it should even not be so, there remains sufficient certainty from matters of fact, that mercury is not only the best antacrid, but also the most powerful antiseptic, or, in other words, the most penetrating opposer to animalation. Many great men have been employed in fearching for a preventative medicine against contagion; but (I say it not with reproach) they have been miftaken in their principles, and therefore

OF MERCURY THO 8229

fore not succeeded in that channel through which they have searched, though accidents in the medical alterations of practice have produced benefits different from what they were intended to perform, and effected by chance what art has laboured for in vain.

Electrically appropriate the bis, 190. In the times when the plague fwept away thousands, we had alexipharmics, plague-waters, and preventative specifics in abundance; but unfortunately they were ineffectual. The principles of these specifics are still prosecuted, in medical works, though, thanks to Providence. we don't ftand in need of them; however, for this bleffing I would beg leave to observe that, next to Providence, we are indebted to mercury; and even the more fo (though not valued on that account) because the benefits it affords are unlooked for, and not owing to any discovery from its known

230 OF THE MEDICAL QUALITY known properties, till manifested from the event.

Let us propose the question, why London and most populous places in Europe have, for so long a time, remained perfectly free from pestilential contagion, different from former times, though continually increased in inhabitants?

I will readily allow the improvements, with respect to a freer circulation of air and cleanliness, have greatly contributed to this happy remission, as well as cautious quarantines; but give me leave to observe also, and which, though singular, I statter myself will at least carry with it the strongest appearance of probability, that if we compare our medical shops in the state they are now, with what they were in former times; as also the present general state of practice with the ancient; we shall most

most certainly find an amazing difference in that one drug mercury; formerly it was a scarce drug, and esteemed almost a poison; but what shop, or what practitioner is without it now? Nay, I will venture to fay, considering the quantity of mercury now in being, its various chemical preparations, both for medical purposes and the arts, and the minuteness of the divisibility of its evaporating particles; the very air we breathe may probably be impregnated so as to stiffe infectious miafmata in the bud; and I am perfuaded in my own mind, that if we were deprived of mercury, we should be subject to as many kinds of malignant contagious distempers, as our ancestors in populous places were heretofore.

But this hypothesis may seem too far fetched to admit of an absolute certainty; I shall, therefore, proceed to experience itself, whereon I have formed

formed the above supposition. Besides the salutary method of steaming places with vinegar, which is allowed on all hands to be a powerful antiseptic, I have sumigated the births of infectious patients with the sollowing composition.

Nº XIII.

B. Myrh.
Oliban. ana 3 ii.
Cinnab. fact. 3 i..
M. s. a.

Of this let one dram be put upon a piece of hot iron, so that it may fume away with a fragrant smell; and, according to the virulency of the infection, let it be repeated two or three times of the day; especially just before the sound person enters the room; and it will prove beneficial as well to the patient as the attendants and visitors.

With respect to the treatment of putrid and malignant diseases, it may easily.

eafily be inferred from what I have faid, that mercury is the basis of all my medicines; and I am fully convinced by the fuccess I have had, that its judicious administration will ever give universal satisfaction.

No disease proves this benefit more to a demonstration than the small pox. It is not only preparing the patient with calomel, that should claim our attention; but reason as well as experience fays every thing in favour of administering the same. antacrid medicine during the whole course of the disease (when the virus is apt to attack the whole system) as fo very fenfibly has been done in the early dawn of the infection; and I have only to add in my own behalf, that by this method I have faved many from falling a facrifice to the most malignant confluent fort, that I am fully convinced could not have otherne straight and all reserve

wise recovered; especially if I compare their cases with others who, with other treatment, have sunk under this terrible disease, though under the care of men of the greatest reputation and same in their profession.

Before, however, I conclude the fubject of fevers, I think it requifite to warn the unexperienced practitioner not to fall from one extreme to the other, which human weakness is very liable to do, and which is too much the fate of the physical profession, more than any other I know of.

The abuse of mercury in venereal cases has been the sole cause of its total neglect in other diseases; and although, with a zeal to benefit mankind in the station Providence has allotted me, I wish that this most excellent medicine might be introduced into general

general use, it would disturb my repose with a sensation of guilt, if I should, though innocently, be instrumental to any injurious error in practice. I must, therefore, intreat my readers to weigh my observations with an unprejudiced and calm judgment, and put them in practice with a caution that is not founded on a timidity proceeding from ignorance and chimerical apprehensions, but on a manly circumspection and confideration of the morbid affection, the operations in the animal occonomy, the various evacuations which are liable to attend, and the constitution of the patient. In the course of the theory which here is laid down, I have only pointed at the two most dangerous errors liable to be committed in the general treatment of fevers, namely, by injudicious bleeding, and forcing fudorifics; and, on the contrary, treated of the many benefits of mercury if judicioufly

judiciously applied. But there is a medium in all things; and I would be understood, that bleeding and diaphoretics have their uses too, as well as, that the use of mercury is not always sufficient; for though I hope I have entered into the spirit of pathological enquiries, and opened the gate to a true indication, yet I am very sensible I am far from having entered into all particulars; as it is to the already experienced and unprejudiced practitioner that I have in particular directed my discourse, and who, I am very fensible, will reap the chief benefit of my observations, I shall therefore barely mention, that

The fystem should, in all acute diseases, be barely impregnated with fo much mercury as may, when duly dissolved in the fluids, operate without causing disturbance in the salutary operations of the animal œcojedicioully

nomy.

nomy. The falivary glands in this diagnostic, if carefully watched, will give timely notice of this imprega nation; and when they discover a fufficiency, mercury should then be omitted till farther occasion (if there should be any necessity for more) or till the fystem is balanced by such evacuations as may clear the fluids of a superfluity.

Very frequently a mercurial eme-tic will effect this, even sometimes in a few hours; and when fo, prudence demands to proceed no farther with this medicine, as a little patience will very often shew the patient does not stand in need of any more:-two or three grains of calomel will effect, at one time, what ten grains will not at another, according as the body is open or bound, or according to the course of the disease, &c.

These sew rules, in which I have been as particular as the brevity of my intended work would permit, I think cannot be difficult to observe, at least to any one who claims a right to practice; I shall therefore conclude for the present, and proceed to the sequel of my subject.

Very frequently a mercurial ender

the will, offest this, even to merizaes

if a few hours; and when the pru-

derice demands to preced he line.

ener with this medicions, of allight

partient does not fried in march of

any more :-- two or three crains of

calemel will enest at one time, wilet.

differible Sections and Josephinish the

fary overlaimes over the ladiusely

olddT.

and the finite second a fee

tely grades well not at another; see for the street of the constant of the second of t

acure difeafer fracti naturally enfire, Of Chronic Distempers.

lently as the body is more or THE difference betwixt acute and chronic distempers consists principally in this, that the first act with a degree of virulence on the nervous fystem, whilst the latter creep about in the fabric, annoy the component parts without much disturbance of the nerves, till fooner or later the ingrafted disorder plunges the patient into complicated evils, that are liable unawares to burst out, sometimes with fo much fury as to make the most powerful remedies come too late. Hence it would feem, that the acrimony of chronic distempers is principally confined to the circulating tubuli; and whilft thus circulated is continually increased, and attended with but a fmall share of pain; but, on the contrary, when once the nervous system, either universally or in part, becomes affected, acute

acute diseases must naturally ensue, which then will rage the more virulently as the body is more or less loaded with such acrimony, and as they have had time to insinuate themselves in the various parts of the fabric.

vicem, while the latter creep about But if we mean to become rather rational than curiously nice physicians, we must not be scrupulously methodical in the distinctions betwixt acute and chronic distempers. The frame of the human body in general will not admit of either exclusively. The parts are intimately blended and united, and the animal æconomy has an univerfal dependance, the whole on the parts, and each part on the whole. I would, therefore, advise the physical guardian to inspect his patients with the eyes of Argus, not partially but univerfally; and fuspect the lurking enemy of treasonable intentions, however

however gently the morbid affections may operate.

For the more we consider what different parts constitute the fabric, their close hand-in-hand combination, the different disturbances which diseased parts are liable to introduce into other parts of different texture, and how many various distempers may be produced from one and the same procatarctic cause, we must be the more convinced not only of the truth of the above observation, but how requisite it is to act with vigour where the virus, of whatever kind, lies open to our attack; and also to preserve the whole system from a contamination which it is subject to.

Let us, however, not fall from one extreme to another. Though I do not infift on a scrupulous enquiry into the primitive causes of diseases,

or the indication of peculiar medicaments, adapted according to names given to diseases, I would, nevertheless, strenuously recommend the most penetrating enquiry into the morbific operation itself, antecedent to and in the present state of the patient.

Add to this, fince chronic distempers are apt to steal upon patients by flow steps, it may be of the greatest importance to observe the length of time that the patient has laboured under the ailment; for though it does not follow, as an unexceptionable rule, that tedious difeases are always tedious in their cure, and vice versa, yet it may with great reason be suspected, that long standing distempers are too liable to affect the fystem so effectually, that the patient stands frequently in need of remedies for more than one disorder; and too often the case is so complicated,

cated, that it is hard to determine which predominates, or which should. first be opposed by medicine.

Mercury is, however, the fovereign remedy on almost all occasions; though other medicines, as auxiliaries, are also to be called in to the support of the favourable operation we have to expect from the judicious administering of mercury.

The grand division I would make of chronic distempers, is barely to distinguish them into acrid and leucophlegmatic. To the first, or acrid class, belong those which more or less affect the nervous system with painful sensations, dispose the fluids to acrimony, and the fibres of the folids to inflammatory tension, produce tumefactions, exulcerations, and actual corruption.

ind whom Malgoloma In

In this division I reckon the various species of gouts, or rheumatic complaints, cutaneous eruptions, strumous disorders, the leprosy, the yaws, and confirmed lues venerea, &c.

To the other division I would reckon most intermittent fevers, scorbutic and dropsical complaints, the morbus pedicularis, palsies, &c. &c.

From this division it may easily be deduced, that disorders so very different are liable to attack different constitutions and habits. While the first class are liable to affect habits of natural rigidity, joined to irritability of fibres, the latter, namely, chronic distempers of the leucophlegmatic kind, are more apt to affect such habits as consist of flaccid fibres; and if we dive into the bottom of this pathological enquiry shall find, that,

that, in aid to the grand intention of operating on contaminated humour, wherever it lies open to our attack, the next indication is barely to relax the too constricted fibres in the one class, and to brace up the too relaxed fystem in the other. Whilst we observe the state of the sluids, we must, with an equal discerning eye, behold the ftate of the folids; for they will ever act alternately on each other. An alkalescent saline acrimony of fluids will ever be attended with a spasmodic constriction of fibres, and wherever the humours tend to a viscid leucophlegmatic state, the folids will ever be flaccid, and deficient in that constrictive difposition, which in the former case is too predominant; and the co-operation of fuch folids and fluids must produce injurious effects mechanically and in the natural course of things.

M'3

In chronic distempers of the acridkind, the system is most disposed to acute attacks, especially when that sacred function of nature (perspiration) is disturbed. To promote this natural effort, the curative indication should ever incline; and whatever method brings this under due regulation, co-operating with the main intent to correct the acrimony in the system by due seasoned doses of mercury (proportioned to the natural constitution and diseased habit of body) will ever prove successful.

The gout, rheumatism, the stone, and gravel, are diseases which have been so much discussed by the learned, and so many specifics have been offered by quacks of all ranks, that the world is out of all conceit with every attempt at removing them, and have hardly any faith left to believe them ranked amongst curable disorders. Yet, that they are absolutely incurable, is far from the

fact; and I will take upon me to affirm, from actual experience, that, unless they are arrived at too great a height, they are equally curable with any other malady incident to the human frame; and that, principally, by the judicious use of mer-cury. But as this small treatise is not designed to investigate the causes and method of cure of every malady, I intend, if Providence spares me health, to treat on those disorders particularly hereafter; and I hope to offer such improvements in the curative indication of those distempers, as may prove of some advantage to the medical art. In the mean time I would only observe, that in gravelly complaints especially, the lithonthriptics, so called, are founded on the most absurd errors; and that the indication in those, as in all other disorders of this class, must tend to destroy the acrimony in the fystem; which the prudent use of greatelt M 4 mercury

mereury will ever be able to perform, if at all possible to be effected.

Cutaneous eruptions have already been treated of in this little volume, and more fully in my Treatise on the Venereal Disease; here I shall only add, that, in all external eruptions, the system should ever be guarded by internal applications.

The remedy, No III. however simple, in the general course will fuffice, and should even be continued after all external eruption has difappeared, and that in proportion to the time the patient has been afflicted. It may not be amis, however, to observe, that some constitutions are so irritable as to be strongly affected by calomel, and griped even with fo small a dose as half a grain; as for example, delicate females, or children of irritable habits; in such cases I have administered with the greatest Middle

greatest success that I could wish for, the following.

Nº XIV.

R Conferv. rosar. 3 iiss.
Ol. menth. pip. gr. iiii.
Calom. pp. 3 i.
M. f. elect.

Quantitas drachmæ dimidiæ vesp. sumend.

Here the calomel is sufficiently corrected by the gentle astringency of the conserve of roses, and by the addition of the nervine essential oil of pepper-mint; whence it proves perhaps the most agreeable and essications medicine in the whole materia medica, and best adapted to delicate constitutions; not but the proportions of the ingredients may be varied by the judicious, according to the case in hand.

M 5

With

With respect to strumous complaints, physic has hitherto laboured under as great difficulties as in any other complaint whatever.

Here it may naturally be expected to enter on the investigation of this kind of complaint; but for this I must refer the reader to my Treatise on the Venereal Disease, and shall here barely observe, that, though the first cause is of ever so innocent a nature, yet when the evil has arrived to a state of actual virulency, it differs in no respect from that kind which is contracted from venereal virus, and the same method of cure will prove equally successful in both.

In this I avail myself of experience, and having ever been desirous to overcome prejudice, and to help others in the same pursuit, I must here declare, whilst regardless of the

the origin, I have treated strumous patients like those who were vene-really affected. I have succeeded to my most sanguine expectation. Externally to the tumesied parts I have applied mercurial plaister or the cataplasm, N° VII. and in exuscerations produced as I have mentioned under that head. Internally I have administered mercurials either according to the recipe III, or No XIV. and, as I have been successful, recommend the method to be practised, persuaded it will redound to the reputation of the medical practitioner, and produce the effect wished for by the patient.

What I have here observed on strumous complaints, I shall repeat with respect to the yaws that generally afflict the poor negroes in the West Indies. When I had the opportunity of practifing on such patients I acquired great reputation in M 6

that branch, and am happy in having recommended the method to others, who have met with equal fuccess.

Chronic distempers of the acrid kind dispose the system to spasmodic affections, thence increase the acrimony of the inflammatory kind; but those of the leucophlegmatic kind dispose the fibres to debility, and thence dispose the humours to a pituitous viscidity, and corrupt the fluids, that by degrees acquire a species of acrimony, not inflammatory, but tending to a cadaverous diffolution; this is evident from the wan. heavy look of the countenance, the flow debilitated pulse, the lassitude of the limbs, and the dulness, or, as it may be justly termed, the pusillanimity of disposition which creeps. upon the patient in spite of reason it-

Concerning

Concerning intermittent fevers, I have already delivered my fentiments. I shall therefore not enlarge here farther, than by observing that a watchful eye should be kept on the patient, as this kind of complaint is generally accompanied by various others, and they ought diligently to be enquired into. Mercury should by all means be the basis of the medical indication, and the bark and calefacients ought always to accompany it; but bark, like mercury, benefits the patient most in small doses; because, if it be over-proportioned to the constitution, the system will reject it; and we thence too often find, that it will prove cathartic, and produce the contrary effect to what was intended; viz. instead of bracing up, will only debilitate and relax. The febrifuge, N° XII. is an excellent medicine; but if the fublimate mercury should prove too active for delicate and irritable stomachs,

254 OF THE MEDICAL QUALITY machs, I would recommend the following electuary, which I have used with uncommon fuccefs. oblerving that

a watchful eye livx die kept on the

R' Conferv. rosar, bried aids as , ineitag

aurant. ana 3 ii. viling

Pulv. nuc. moschat.

Extract. cort. peruv. ana 3ii.

Calom. pp. 9i. od antom

M. f. elect.

Quant. nuc. mosch. man. & vesp. Sumend.

To this electuary may occasionally be added the fal martis, which gives a vigour to the pituitous blood, and feems to cause an internal motion in the crassamentum of the fanguineous mass. Thence in the chlorosis, and in suppression of the menses, mercury, combined with chalybeats, proves the most effectual aperitive emmenagogue which the materia medica caschs,

medica can afford, and of that class which will correct the pituitous mass of blood, and restore a vigorous health. In such cases I have administered the following with the

most wished-for success on wyderi

fame voucher on which I have built the theory here IVX M. Bur here

Re Conserv. rosar, rubr. 3 iii.

Sal mart. 3 1s. 16 to or about old

Calom. pp. 13 fs. morent to slinds

Syr. croc. q. f. Tim sideling sided

1

M.f. electes neds monoidinos

Quant. nuc. moschat. man. & vesp.

Mineral waters are also here of great benefit; but care should be had not to use them during the sebrile intervals, as that might be apt to irritate the nervous system, and dispose the habit to inflammatory affections, as experience has too frequently confirmed.

If we turn our thoughts to the feurvy, we shall also find mercury one of the most fovereign remedies that nature affords us. This, however, has been, and yet is, denied by many who appeal to experience, the fame voucher on which I have built the theory here offered. But before we discuss this matter, I would refer the reader to what I have faid on the abuse of mercury, which, in scorbutic patients, must have been more conspicuous than any other disorder; except indeed emaciated venereal patients, who have been facrificed equally with fcorbutic patients, by its improper application.

The true scurvy is a disease, I apprehend, less understood in the general, than talked of. It is common to hear patients complain, that they are afflicted with a scorbutic humour particularly in spring and fall. If we enquire into the cause, there is not

the

the least colour of any thing that could give rife to the scorbutical taint complained of, except indeed a superfluity of the best and most wholfome food, or indeed the luxuries of life; and if we examine into the state of the patients, we shall find the effect corresponding with the cause, as opposite to the scurvy as the causes are by which the real scurvy is produced. The fact is, it is next to an impossibility for people breathing the country air, and living in peace and plenty, to be tainted with the fcurvy; and what generally is termed so, in such situations, is no other than chronic humours contracted by a superabundancy of diet, which, from a general effort of nature, is thrown to the external furface of the body; where it operates like the various species of cutaneous eruption, and which in the cure depends wholly on the operating on the animal acrimony by mercury, which,

which, prudently administered, will for the most part be sufficient.

But the true scurvy arises from other causes, operates with different effects, and requires a more complicate management in the cure.

The principal cause of the true scurvy is a depraved chylisaction, produced either from starving or contaminated and injurious food; and thence people in real want of fresh and wholsome food, either from some prejudicial custom, or being so situated as to be compelled to feed upon old decayed aliments, or starve, are exposed to the true scurvy.

Food, whether animal or vegetable, when fresh, hath a vivifying volatile spirit, which quickens the animal functions; but the same food, by length of time, loses not only this

this volatile effence, but the contained nutrifying parts concentrate, as it were, become dry and infoluble, and though, by art prevented from actual putrefaction, acquire nevertheless a state of decay or disposition to putrescency, which, when introduced into the fanguineous mass, disposes the system to be contaminated with the fame.

Animal food hath an alkalefcent nutrifaction, and vegetable foods nutrify, but have a disposition to acescency; the due proportion of both checks each from becoming predominant; both when fresh, happily blended, cannot fail in a found primæ viæ to produce good blood; but when the alkalescency becomes old and rancid, it tends to putrefaction; and the acescency of the vegetable food becomes putrid and stale by age, it loses its saccharine and vinons qualities, and degenerates into En acrimein.

acrimonious resin, which not only is insoluble, but preys upon the animal spirits, and damps the tone of the nervous system.

What I have here observed relates principally to the bad provision in long voyages at sea; to which I must add, that the great quantity of salt, though it prevents the sudden progress of putrefaction in animal food, nevertheless contaminates the juices almost equally as effectually as putrefaction, and in those who are obliged to eat it so abundantly debilitates the nervous system, unable to counterbalance the aptitude to stagnation in impoverished and putrescent blood.

Belides these causes, I must not forget to mention the putrid water, and, what is worse, the poison made use of to prevent its becoming so. But I shall be led too far from my main

main object: let it suffice, that the true scurvy is a flow putrefying corruption in the living subject. The animal juices acquiring a tendency to putrefaction, the blood loses its alkalescent and vivifying spirit, and becomes grumous, the lymph its gelatiousness, the crassamentous part its animal refin, and the ferum acquires a phagedænic acrimony:now fuch a corrupted mass of blood cannot but occasion numerous evils in the animal occonomy.—The fluggish inactive blood, unable to circulate in the minute parts of the fabric, is subject to stagnate, the impoverished lymph being unable to nutrify the stamina, their tone must debilitate, and the acrimonious ferum tears and disposes them to the same corrupted state as the fluids. Hence arise those numerous evils attending the true fcurvy, which, in their progress, sooner or later sacrificee

262 OF THE MEDICAL QUALITY crifice the patient, who falls a victim to that wretched diforder.

The fymptoms of the true scurvy commence with an universal lassitude and proneness to indolence, both in body and mind; fleep steals on, but without producing a fatisfactory restorative vigour-anxiety of mind torments the fenforium commune at the waking hours, and phantoms of danger and misfortune hover over the confused and bewildered dreaming imagination, annoying the patient in his sleep; the mouth becomes foul, fœtid, and fore; the appetite depraved, chylifaction painful-and gradually the whole system loses its active powers, and finks under debility, emaciation, and corruption.

It is in vain to attempt remedying the effects, without removing the cause. I have, however, with great astonish-

aftonishment and admiration beheld the vivifying effect which the effluvia of a new-killed animal has had on a scorbutic patient, and no less the immediate strength obtained from growing vegetables, which patients have devoured in a field with a greediness, as if nature exerted her last effort against dissolution. In Greenland it is often practifed, and with great success, to immerge a fcorbutic patient in the bowels of the yet warm carcase of a newlykilled whale; and, if opportunity has offered to repeat this operation, it has been attended with furprifing advantages, infomuch as to promife a perfect cure.

versal anotheries presents the and But to proceed to what is more practicable, and what no climate or fituation may be exempt from. From what I have faid it appears, that the curative indication of the scurvy must tend to three objects. The firft .

first is to correct a putrescent animal acrimony in the whole system; this is effected by the antiseptic qualities of mercury; but as the stamina of the folids are not only in the most debilitated state, proportionable to the progress of the disease, but, as I may say, friable and void of their natural elasticity, it follows, that mercury should be introduced into the fystem in as gentle a manner as possible, without pain or disturbance to the animal occonomy. The fecond intention is to introduce into the depraved state of the putrescent blood, an animal, volatile, reviving, alkalescent spirit, and a saccharine vinous essence, which, as the universal antiseptic, prevents the animal alkalescency from degenerating into a cadaverous putrescency. This intention fresh animal provision, together with beer, wine, fugar, a decoction of malt, and, if possible, fresh vegetables, may effect; but, above

above all, what I have most satisfactorily experienced, even when wholesome food was not to be had, was the plentiful use of vinegar.

The third intention is to brace up the debilitated system; but in this kind of debility the bracing up must depend principally upon true antiseptics, and more especially of the vegetable kind. For, though mineral antiseptics will be a preventative to putrefaction, yet in scorbutic cases it must be observed, that nutriment is required; and fince minerals are in no-wife nutritive, they should be administered in this case with a sparing hand. Here I must not forget to observe, that the bark, though by no means to be omitted, should be used with the greatest caution imaginable. For, though it braces; it is nevertheless of the styptic species; or, to convey my idea perhaps more intelligibly, tans, as I may

may fay, the minute tubuli, so as to prevent a due circulation in the organs composed of them; or, if nature opposes this, causes by its irritation such superabundant evacuations as here should by all means be avoided.

Before I proceed to that method of cure, which I have experienced to be effectual, as well as agreeable to the principles above, I would obferve that the scurvy, which affects the system so universally, cannot fail of bringing with it a train of numerous other diseases here too tedious to enumerate. Cutaneous eruptions, inflammations, ulcerations, fevers, colic, jaundice, dysenteries, and numerous other evils, arise and add to the distress of the patient; and all in their turn should be duly confidered and inspected into. Much also depends upon the natural constitution, sex, and age of the

the patient, the climate and situation.

With respect to constitution, those of phlegmatic temperaments and relaxed habits, especially if they incline to melancholy, are much more subject to become scorbutic than athletic habits, and fuch as are of a natural activity; and women, partly from the fame reason, more than men; but both fexes more particularly in advanced years. For old age itself approaches so near to the scurvy, that few superannuated people leave the stage of life, but by a scorbutic decay. The colder climates are more productive of the fcurvy than the warmer, and the fea much more than the shore.

Next to fresh provision of the animal and vegetable kind, mercury in small quantities will be found the wished-for purifier of the acrimoni-

N 2

ous juices in the system. But this alone is here not sufficient; it must be accompanied with antiseptics and antiscorbutics of the vegetable kind. Mustard, horse-radish, and scurvy-grass, are on all hands recommended, and most excellent they are. I highly approve of them; but, beyond all these is good vinegar, which I have applied with the most wishedfor success in the following manner.

Take a large tub, in which seat the patient naked on a low stool; put into the tub a vessel with about a quart of vinegar, and cover the patient over-head with a blanket, as if he was seated in a hut; then heat an iron-poker, and stir the vinegar till a strong steam arises, which not only is to surround the body, but to be breathed by the patient. This method I contrived many years ago at the whale-sishery

ın

in Greenland; and with so much success has it been attended, that the patient, who could hardly crawl to the tub, was able to walk out of it with recovered strength and refreshment.—The operation should be repeated once, twice, or three times in the day, half an hour at a time, and continued as occasion requires. Internally I would recommend the following electuary:

Nº XVII.

R Pulv. sinap. Durham. 3 ii.
Conserv. rosar. 3 ii.
Calom. pp. 3 is.
Ol. menth. pip. gutt. xx.
Succ. limon. q. s.
M. f. elect.

Every night one tea-spoonful to be taken. A decoction of malt, and occasionally a glass of generous wine, will also be of the greatest benefit.

If

If the patient is at the same time of a pituitous and leucophlegmatic habit, the curative indication may tend to the remedies pointed at N° XII. or N° XVI. as may best suit the constitution of the patient.

With respect to local evils that attend the scurvy, such are best cured with mercurial topics, as I have already mentioned under that head. Here it merits, however, fpecial notice, that the cadaverous stench and exulceration in the mouth yield to no application fo foon as a mercurial mouth-water. And this great antiphagedænic I have not only used with the wished-for success in scorbutic cases; but when I have been called in to patients whose mouths have been in a much worse state by falivation, I have, with fingular fuccess, applied the following:

N° XVIII.

B. Aq. rofar. 3 iiii.

Merc. fubl. cor. 3 i.

Syr. limon. 3 i.

Dictionaria Signatura autica

M.

Let the patient wash his mouth with this lotion two or three times in the day; which will not only quell the fætor, but heal the ulcers with the greatest speed and safety. It must be observed, however, that this mouth-water will blacken the surface of the teeth; but this is very easily remedied by rubbing the teeth with lemon juice, or elixir of vitriol, and afterwards rubbing them over again with sweet oil.

With respect to the livid spots that appear on scorbutic patients, as also their phagedænic ulcers; those have been mentioned under the proper head; and, if they are treated N 4 accord-

272 OF THE MEDICAL QUALITY according to the principle there laid down, fuccess will ever prove in their favour.

miror all-de provins I shall conclude my theory of the nature and cure of the scurvy by observing, that the scurvy, for the most part, attends putrid and malignant fevers; not indeed from a poverty or depravedness of food, but from the depravity of the habit itfelf. And in fact the difference only is the rapid progress of the one, and flow progress of the other, owing to the fudden change of a vigorous body, abounding with a rich alkalescent spirit in the first, and the gradual decay in the emaciated fabric in the other. And this is manifettly in daily experience, by observing that lean and thin habits shall ever stand a better chance, in acute distempers, than the full corpulent habit, intoxicated with animal spirits and of blooming health; which is the

the more disposed to a putrid conflagration, in like manner as a richstored fabric is the more liable to be confumed by the all-destroying flames, on account of its valuable contents.

THE PERSONS

Respecting, however, those chronic complaints that affect gross habits, by cutaneous eruptions, even in the vigor of health; they have not in the least any relation to the true scurvy, though they are termed scorbutic also; I should rather call it a surfeit, as it proves more a superabundance of rich fluids than a defect of it; and therefore the prudent use of mercury, even alone without any auxiliary medical aid, will here ever prove as effectual as we may hope and wish for.

From the fcurvy I shall lead my reader into a train of reflections on dropfical diforders. Here is room N 5 for

for speculation indeed, and to penetrate into the ætiological investigation of this malady, with unprejudiced judgment, requires not only a thorough knowledge of minute anatomy, but a just conception of the animal occonomy as well in the found as in the diseased state. I am almost afraid to enter upon the difquisition here, lest it should lead me into a chain of reasoning tooextensive for the conciseness of this work; but without a true conception of the malady, we can form no rational indication of the cure.—In the true diagnostic of a disease confists the art of a physician.

For method's sake I shall distinguish dropsical disorders into partial and universal; partial, when the malady is confined to particular parts, and universal, when the whole system is borne down by that disease and its attending evils. But be

it partial or universal, it seldom or never arises original; but is subsequent to some preceding sickness, or brought on by injudicious treatment of fuch disorder, and in particular by too frequent blood-letting, as I have already mentioned before, and will farther make appear in this enquiry.

The ætiological distinctions of confirmed dropfies are those of the anafarca, ascites, and tympanites.

An anafarca is, when the vascular fubstance in the membrana adipofais diftended, and filled with extravafated fluid. An afcites is, when the extravalated fluid is collected in the duplicature of the peritonæum, or collected within the abdomenamongst the viscera. And lastly, a tympanites, when the extravasated fluid is combined with generated air, or rather with putrescent vapour;

N 6

by which flatulencies, since the pores of the abdominal teguments are in this case so closely contracted as to be void of all perspiration, the abdomen acquires a rebounding sound when gently struck; whence the disease has derived the name of tympany; but in fact those two latter are of one kind.

Among partial dropsies I reckon the hydrocephalus affecting the head, to which children are subject; hydrocele or a dropsical scrotum; hydatides of the viscera; and lastly, the cedematous swelling of the legs.

The hydrocephalus in children is, when the extravalated fluids are collected either between the cerebrum and meninges, or even between the dura and pia mater, distending the head so as to separate the sutures of the

the yet tender and unconnected bones. of the scull.

The hydrocele is either when the extravafated fluid is contained within the vascular substance of the scrotum, or collected around the testicle in the vagina, or lastly, though rarely, in the testicle itself.

Hydatides of the viscera are a peculiar species of dropsy, which confifts of small globular bags filled with fluids; they are found in the liver, the mesentery, most frequently in the ovaria, and fometimes in the intestines.

Lastly, cedematous swellings in the legs are a pituitous collection of humour in the membrana adipofa, which is most discerned at night, and least in the morning.

acilya

There

There are various other dropfical complaints which I shall pass over; nor should I have been so particular in defining those, were it not that I have particular remedies to point at; which, though out of the road of common practice, have nevertheless greater certainty in their curative indication, and will farther demonstrate the extensive utility of a judicious application of mercury. But let us stop a little while first, and examine the patient with a more circumspective eye than common in those disorders; and we shall find greater obstacles to be removed than barely the dropfy; much more to be effected than either purging of the water, by drastic hydragogic cathartics, or letting it out by paracentefis.

And first, if we turn our eye to the patient that is weighed down under an anasarca, or universal dropsy, what

what number of diseases do we not find the poor fabric labour under, besides the load of pituitous humour accumulated in the cellular fubstance of the expanded body? An unquenchable thirst, a depraved appetite, an asthmatical difficulty of breathing with evident figns of diseased lungs, pain in the abdomen which indicates diseased vifcera, fuch as a scirrhous liver, obstructions in the mesentery, &c. pancity of urine, ischuria, strangury, colic, intermittent fevers, &c. If we give an attentive ear to the fad history of the disease, from the commencement down to the present time, we shall frequently have a list of succeeding complaints dreadthe narrative of vast variety of medicines, with the often repeated bleeding, one would imagine enough to kill a horse; and I have sometimes wondered how nature could struggle

280 OF THE MEDICAL QUALITY
fo long as to leave the patient alive
to tell the doleful tale.

In vain do we here propose to purge off the humours by drastic purgatives, to force urine by stimulating diuretics, to deprive the poor patient from drinking; or, even when the accumulated humours are at so great a height as to indicate a paracentesis, what do we gain by the palliative cure of tapping more than a little immediate ease; which more than ninety-nine times out of a hundred sends the poor emaciated patient the sooner into the grave.

The expansion of the external tegument in dropsical patients, however striking it falls into the eye of superficial observers, ought to claim the least attention of the judicious physician. The debilitated and emaciated constitution becomes only the more so by drastic cathartics or stimulating

mulating diuretics. For, though I readily will admit that wonderful effects have been produced by fuch evacuants; yet I am persuaded nature itself brought them about, but force was ever found ineffectual. Let us remove the acting cause, and the effect will cease in consequence thereof. We may argue as learnedly as we please concerning obstructed viscid humours, that want to be attenuated in order to circulate freely; that they must be carried off by stool, urine, or sweat—this may be admirable theory, but in practice will be found of little or no use. We must search deeper into the fystem, and we shall find, that the curative indication of correcting the acrimony in the principal viscera and to restore a proper tone in the moving fibres of the lymphatic fyftem, will be the true basis on which our fuccess depends; if at all nature is to be restored again to perform her

282 OF THE MEDICAL QUALITY her different functions in the animal occonomy.

Many, very many are the different causes which give rise to a dropfy; but the immediate acting cause is a debility in the lymphatic fystem, unable to push forth the lymph through the vascular lymphatics; whence they burst and extravasate the unconcocted lymph in the interstices of the cellula adiposa; and this deprives the blood of its lenient, balfamic, or nutritive parts; whence the fecreting emunctories are locked up, and an obstruction in the evacuating organs, especially of the serous kind, must naturally be the consequence - But what I presume in this place merits attention, is the predisposing cause that particularly affects the lymphatic Tystem with this debility; and this I am strongly persuaded lies more in the respirative organs than in any other

other viscera in the system. The analogy of this I have drawn from the repeated observations I have made in dropfical patients. I will not take upon me to determine this morbid affection with an absolute certainty in its operation; unprejudiced judgment may, however, in time improve my hints to the advantage of ætiological enquiries-Indeed, with all our pretended knowledge, we labour greatly in the dark in most diseases; and this our imperfection we discover daily, as we advance in our enquiries into nature.

Physiologists are not agreed on the respirative operation in the animal œconomy. I shall not sum up the variety of opinions on that head, but advance my fentiments on that function, from whence I shall deduce my analogy.

I hold it then, that nothing is more essential to life, and the preservation of it, than a continual exchange of air throughout the circulation of fluids in every, even the minutest part in the animal mechanism. This exchange of fresh with the foul air is the principal operation of respiration.

The blood that is circulated through the lungs by the pulmonary artery is more in quantity, in the fame space of time, than the whole bulk of blood in the system besides. During this rapid circulation, every particle of blood receives this exchange of air. That portion of air which is received by inspiration, being absorbed by the slow progress of the pulmonary vein (whose ramifications spread into every vesicle) impregnates the whole fanguineous. mais; whilst the arterial ramifications fend out from every officulæ anastomofing;

mosing with lymphatic in con-junction with the pulmonary veficulæ, that portion of exhalation which is excreted by the lungs; infomuch, that the air which is inspired, or received, is wholly different from the breath which we exspire; the latter being the putrefcent exhalations in which real air has the least share.

Whilst now, not only a due degree of circulation of the fluids in the system must depend on a free circulation of the air; not only on hydrostatic principles of natural philosophy, namely, rendering the internal interstices in the system able to counterbalance the external atmofphere; but from the natural necessity of exhaling from the fystem the alkalescent vapours from the mass of blood, which is unavoidably necesfary to prevent a putrescent decay. I fay, whilst a due circulation of the

the blood depends upon a free circulation of air throughout the whole fystem, it cannot fail that when the function of respiration is impaired, the fluids must be defective in their course, and degenerate into corruption. And fince the lymphatic fyftem is indued with the least elasticity, without strength sufficient to exert themselves to push forward the fluids; when their officulæ are closed up, to receive fresh air, they must not only fill, but, being filled beyond their natural extension, burst, and pour their contents into fuch cells as give way to the extravafated fluid. It is from actual facts in nature, that we are rendered capable to make fuch observations from whence we draw our most useful inferences—and observing a patient in a dropfy, we shall always find the disease attended with a difficulty of breathing (which too frequently proceeds from actual diseased lungs)

and obstructed perspiration of the diseased part. But what supports this opinion the more is the examination of diseased patients after death; and in fuch cafes I have always found the lungs, as well as other viscera, in a very morbid state.

It may, however, be objected to this, that probably the difficulty of breathing, and the decay of the lungs and the viscera, may proceed from the dropfy; or, as some have accounted for it, that the expanfion of the abdominal parts presses upon the diaphragma, thereby narrowing the pectoral cavity, and fo confining the lungs makes them play with less ease, or spreads the morbid effects on the lungs and viscera. But the history from the patients must convince us to the contrary; and I must hold it for granted, that the dropfy arises principally from a defect in the respirative

as a concurrent cause, a constriction of the pores, or emunctorial osticulæ of the lymphatic system. It remains then lastly to explain what kind of a defect in the respirative organs gives rise to the dropsy; since daily experience consirms, that at least as many, if not more, labour under asthmatic complaints and confirmed consumptions without the dropsy, than are oppressed with this dire disease.

To this I would answer, that this kind of diseased respiration, or the effect resulting from it, depends in a great measure on the natural or acquired constitution of the patient; thus, for example, the dropsy is more peculiar to corpulent people, that either have been corpulent in consequence of repletion, or have a propensity to obesity, than to those of athletic, or thin, or constricted-sibred

fibred constitutions; but more especially fuch as are or have been very fat; for the fat lodged in the cellulæ adipofæ, or internally about the viscera, being absorbed or wasted by fickness or otherwise, the cells, being again collapsed, retain a flaccidity, and are readier to receive the extravasated lymph which is diverted from its ordinary course.

In support of this argument, we find women advanced in years, who have been very fat, and men of lax habits, oftener fuffer in this malady than irritable constitutions, who from the same defect in the respirative organs, or from obstructed perspiration, are hurried into more acute difeases; and, instead of finking under the pituitous extravasated humour, fall a facrifice to acrimony of a sharper or more putrescent nature, which hurries them off the stage without a dropfical complaint. · So

So much then for the predisposing cause of dropsies in general; and now I shall proceed to make some observations on the curative indications of the particular kinds.

The anafarca is when the œdematous fwelling is univerfal in the external teguments, commencing from the inferior extremities, and afcending gradually upwards about the abdominal region. If there is no more combination of disease than what appears to view, the cure of an anafarca is not fo difficult, if proper remedies are applied; efpecially if the habit is on the rifing fide of the meridian acme, and the lungs are not too far gone. All depends on three points, namely, first to restore a free communicative exchange of the atmosphere with the exuding vapor of the internal fluids (that is, a perspiration of the surface

of the body); fecondly, to give tone to the elastic debilitated fibres; and thirdly, to correct the viscid acrimonious humours.

All these indications may be effected by the judicious administering of mercury; to which I will add, if dropsical complaints, of whatever denomination, are arrived at such a desperate height as not to yield to mercury, all other medical aid will prove ineffectual. But, to the aftonishment and pleasing furprize of many, I have recovered dropsical patients to perfect health by the application of mercurial medicines, who have been by all beholders given up as lost. The remedies, however, have been as fingular as the fuccess; but whilst they are built on true medical principles, I am perfuaded they must have the affent of the judicious, and am happy 0 2

292 OF THE MEDICAL QUALITY that success will crown those who reduce them to practice.

In the first place, if the expanfion of the abdomen will admit, I recommend to begin the cure with a mercurial emetic; not only to clear the primæ viæ, but to open the fecretory organs, and to impregnate the fystem with mercury.-This first step, however, requires a judicious caution, to adapt it to the constitution of the debilitated patients. In robust, though leucophlegmatic habits, the turbith, from one to three grains, may make the basis of the emetic; but in more irritable habits, the draught, No X. may be exhibited; which fometimes will open every outlet of the system so effectually as to move the urinary organs, produce a temporary diarrhæa, and bring on exudating sweat; infomuch as to effect fometimes a radical and lafting cure, with the addiadditional help of the electuary No XV. or the like medicine. If, however, the like falutary effect is not produced we must proceed farther:

Nº XIX.

Be Liniment. sapon. ziiii.

Sp. sal. armon.

Unguent. cærul. fort. ana zii.

M. s. a. f. liniment.

With this liniment anoint the anafarcous parts, and wrap up the patient in flannel; which will not only produce an universal opening of the pores, but stimulate the debilitated lymphatic system, together with the vascular fibres in the cells of the extravasated pituitous shuid; so as vigorously to exert their efforts to disengage themselves of their cumbersome contents. We are often advised to debar the patients from drinking. This, I think, is both

both cruel and irrational; on the contrary, I would recommend to the patient to drink plentifully diluting draughts of the antispasmodic kind. In the annals of medical observations, we have instances of wonderful fuccess produced by cyder. To this I have no objection; but care should be had that it is pure, and not poisoned by leaden cifterns, which some farmers have made use of to the destruction of those that drink it. I have, in the course of my observations, seen astonishing effects from butter-milk; and from the acescency contained in this liquid, I have the greatest opinion of it; believing it to be the best of any kind of drink, provided it will agree with the patient's palate; which, if prejudice is overcome, it generally will. Chalybeated waters are also of the greatest fervice, especially if a fever in the fystem does not forbid it. But, to be more

more medical, I recommend the following:

N° XX.

Re Mellis recent.

Rad. petrofil. vul. recent. ana 3 iii.

Aq. com. 3 xvi.

Bulliant, & colat.add.nitr.depur. 3i.

Mer. fubl. cor. gr. i.

Vin. canar. & facc. alb. ad grat. Sapor.

M.

This drink will not only prove agreeable, but must have many good qualities in the fystem; and I would have it used from a pint to a quart within the 24 hours.

With respect to the tapping operation, or the paracentesis, I would ever wish to avoid it; because, though a temporary relief may be expected from it, yet it is of so precarious a nature, that, in the general course of practice, it seldom

turns

turns out successful. What is the cause of this however? It is generally imagined, that the patient, thus suddenly exhausted, loses, together with the fluid, the animal spirits; as the too violently extended system falls into a flaccid collapsion; and thence reduces the nervous system into a state of inactivity, which inevitably finks the patient into the grave.-This is in fact true: but the immediate cause, which delivers the patient into the arms of death, is a true mortification of the collapsed vesicles, thus suddenly emptied, which foon spreads over the whole system. To prevent this in fuch a hazardous operation (for there are cases where necessity calls for it) care should be taken not to evacuate wholly the expanded abdomen; and immediately upon the evacuation, to apply fo large a mercurial plaister as to cover the whole abdomen, leaving an opening for the

the puncture, which might be kept open with a tent as well as with the trocar; and to a much greater advantage, fince the exudation might thereby be continued by flow degrees. The mercurial plaister will not only have the advantage of proper bandages, in keeping the abdomen in a tension in a uniform degree; but will prevent, by its antiseptic quality, the approaching gangrene and sphacelus, which, in this operation, is above all things to be guarded against.

The ensuing languor of the patient, after such operation, must be carefully inspected into.-The vitriolic æther and essential oil of pepper-mint are noble calefacients; and anodyne medicines may also be administered with much success; but mercurials, in small doses, should here at all events not be omitted. Because on that noble medicine the patient

298 OF THE MEDICAL QUALITY patient must depend for his recovery, if human help can avail.

Let us now examine the patient labouring under an ascites-here, the extravafated humours are contained within the cavity of the abdomen itself. One would imagine it impossible to effect a cure without letting out this extravafated humour by a paracentesis; and yet the operation fucceeds feldomer here, than even in an anafarca, unless with the utmost caution and circumspection. But so wonderful are the paths of nature, that notwithstanding the smooth surface of the peritonæum and the intestines, which we anatomically observe in a cadaver, the extravasated humour will nevertheless be abforbed, evacuated, and thrown off by stools or urine, with an amazing rapidity. Nothing proves more the multiplicity of the imbibing or absorbing vessels-and let us philofophize

fophize as learnedly as we pleafe concerning the flow progress through fuch minute tubuli, we shall find however that experience baffles all our hypotheses, and that there are principia in the animal œconomy beyond our reach. Suffice it, however, that when fuch falutary changes take place, we may observe the whole fystem seems to be at once opened, and all the fecretory and excretory functions re-established at once. Here then again I must speak with rapture on mercurial applications, both externally and internally, which I have experienced to have had the most astonishing falutary effects. I have been called in to patients who have feemed almost suffocated for want of breath, having the abdomen enormoufly swelled, hard, rebounding, and loaded with fluctuating humours, and labouring with suppressions of urine, and various other complaints-Over the whole abdomen I have applied a 06 mercu_ noil W

mercurial plaister, even to the spine. I have at the same time applied the like plaisters to the wrists and to the temples; given a mercurial emetic proportional to the patient's strength; and, if the suppression of urine has been great, ordered the feet to be put in cold falt water, &c. What has been the consequence? The emetic evacuation has occasioned an universal perspiration, and brought on a temporary diarrhæa; the cold pediluvium opened the urinary organs; the mercurial plaister has opened the pores on the abdominal parts; the belly has flackened from a tympanic protuberance to its ordinary bigness, so that the next plaister has been reduced to half the fize; and my patients have, by internal mercurial medicines, recovered, in a state, when by all medical judges the cure has been despaired of, and the paracentesis has been advised as the only chance. When

When the extravasated humour within the abdominal cavity acquires a degree of corruption, it naturally generates corruptive air; which, as the pores of the absorbing vessels are thut up, must consequently inflate the abdomen the more; and which, besides pressing up the mediastinum, and obstructing the play of the lungs, is liable to infect the whole system with a putrescency. Now where can we meet with more relief from art in this case than from mercury ?- And whilst practice confirms fuch a theory, I think we can have no greater inducement to put it into execution; and, for my own part, I am fanguinously persuaded many lives will in future be faved by it, who otherwise must be lost.

Taking leave of universal dropsies I proceed to the partial ones, and shall endeavour to be more concife. The first then we shall observe, is the

the hydrocephalus in children. This disease generally happens within the first two years, and is attended with the rickets. The causes are too frequently attributed to carelessness and neglect. Though this may be fo fometimes, yet it is far from being a general rule; for we find children under the best management labour under the like difeases. In the general practice a hydrocephalus feldom turns out well. But a mercurial plaister, applied over the whole head of the diseased child, will certainly perform the cure, if it is at all practicable—and by this opportunity I cannot but mention, that mercurial plaisters on the wrists and ancles, together with very small doses of calomel, of about one fourth or not more than half a grain within the 24 hours, have not only cured the rickets, but helped the poor infants through the rugged and painful roads of dentition, beyond any otherother applications that have been recommended. of ont bella war of saig

latter operation requires

The hydrocele or dropfical fcrotum is either partial, or attendant on an universal dropfy. If partial, it is not of fo difficult a nature as the (more troublesome than painful) disease indicates. If the habit is leucophlegmatic, it ought by all means to be corrected; but sometimes the diforder is fo local, that proper topical applications will be found fully fufficient.-In the general course of things, especially if taken in time, a mercurial plaister over the scrotum will effect all we wish for. But if the distension of the vascular substance is over great, and a fluctuation of humours point blank indicates an out-let, I would not hefitate a moment to let it fairly out with incisions wherever it might feem requisite. The same also is to be done if the extravafated humour should

fhould be contained within the vagina furrounding the testicle. But to perform the latter operation requires a chirurgical hand well versed in anatomy: and when it is performed with proper skill, mercurial applications will complete the cure without so much as admitting of a doubt; provided furgeon and patient join their mutual best endeavours. Here, however, it may not be amiss to caution, not to mistake or confound a hernia intestinalis with a hydrocele, or vice versa. The judicious will foon be able to determine the difference. The true criterion certainly is, that the hernia will subside in a recumbent posture, whilst the hydrocele will continue; though even to this rule there are exceptions. But as the talk is fit only for the judicious furgeon to undertake, I shall not enter deeper into the nature of the disease, having already mentioned what relates to the

the benefit we have a right to expect from mercury.

I shall now fay something relating to the cure of the hydatides in the various viscera. And here again I cannot refrain from entering somewhat into physiological disquisitions into the animal occonomy; in hopes to throw some light on the wonderful acts of nature.

On examination of those vesicles in the dead body, we cannot doubt but they have been actually formed in the disease; but the question how requires a deeper enquiry than what we learn from the generality of theories, handed to us by the most learned physiologists.

It is not enough that we have the circulation of the fluids through the fmall tubuli, and the extravalation of fuch fluids; but we are convinced from

from actual observations, that even the very humours, so extravasated, have an innate vivification, or a fpirit of intestine motion, by which they form fibres and fubstances which we reckon under the class of folids. And, if we will admit of a cure of the hydatides, we must equally believe that fuch folids must be subject to be converted into fluids again. Hydatides are vesicles filled with fluids, fometimes single, sometimes in clusters, like bunches of grapes; fometimes appending as to a tubulous stalk, sometimes globular, swimming about in the extravalated fluid. And, if we examine them microscopically, we shall find those bladders invested with tendons and bloodvessels, which must convince us they have had a circulation (and fimilar to the animalation which I have mentioned before in glandular diseases) depending upon a more fublime principle, by which nature operates, ritori

operates, than the dull idea fome physiologists have maintained of the animal œconomy; namely, that the fibres of the folids are no more than the congelation and concentration of fluids into folids, fimilar to what we observe in unanimated matter. Let us never forget the great distinction to be made betwixt the operation of nature, with the same materials, in the living animal and when deprived of life; and we shall soon be convinced how impotent our experiments with dead matter are, to prove the operations in the living animal ceconomy de sand salvoit 1460 duin

dynamics themself and the started But to return to our subject: hydatides we have frequently observed in the lungs, the liver, the spleen, in and about the intestines, and fuch parts of the viscera as abound with lymphatic vessels; but more especially in the ovaria and the capital organs of generation in women.

Some-

Sometimes they have been found in persons, that have not had external figns of a dropfy, and from which we reasonably deduce, that more patients have them than are taken notice of. But in the confirmed dropfies they generally have appeared in great abundance; and more particularly in the lungs, the liver, and the ovaria in women. First then I would observe, I always suspect them in the lungs of patients that labour under a leucophlegmatic asthma. This, indeed, is rational enough, if my conception of respiration be a just one; for the lungs abound with lymphatic vessels, the fibres of which being debilitated and extended by the vifcid lymph, and not yet deprived of the animalating spirit, they will form hydatides, and annoy the air-vesicles of the lungs; so that respiration becomes not only difficult, but infufficient for circulation. Whence naturally the fluids must

must extravasate somewhere, and of course occupy such part of the circulating system as has the least resistance, namely, the lymphatics, the seat of dropsical complaints.

Hydatides in the ovaria in women have been observed by almost every anatomist, who has had op-portunities to diffect women that have died in those kinds of diseases. It is frequent enough for women who have had heavy abortions, or were emaciated with child-bearing, to complain of a heavy pain in one or both fides above the hip. I always suspect such patients of hydatides in the ovaria; and what confirms me in that opinion is, that amercurial plaister applied to the spot has given them present relief, when every other remedy they have made use of proved unfuccessful. I have only to add, that women, who had been barren for many years, have thus

310 OF THE MEDICAL QUALITY thus restored, and borne children with health and vigour.

Hydatides are liable to form in every viscus of the system, and whilst our skill does not extend to repair a patient, in the same manner as a mechanic takes afunder a piece of machinery, puts it together again, and sets it in motion, what can we do, I fay, but apply our remedies wherever opportunity may suit? We may, indeed, indicate to benefit the lungs, liver, uterus, ovaria, &c. but furely there can hardly in our days be a man left so ignorant, as to suppose he can commission a medicine to march directly to fuch and fuch parts, and no where else; and this considered, we see how empty the appellations of cephalics, pectorals, hepatics, &c. found in the ear of a rational physician. In the animal occonomy nature is for ever at work, either right or wrong; that is, either according to the first innate

innate principle of the animal, or contrary to that principle, when misled by diseases. To act against the latter is the employment of the medical art; and fince the vicious operations of nature may produce a thousand different effects, though the first moving cause is acrimony, fimilar to the many vicious tendencies in the mental faculties produced by corrupted principles in the judgment; all that we have to do, or can do, is to annihilate the moving cause, and then the effects will cease of their own accord. And fince the grand Herculean medical club is mercury; we may, if we handle it skilfully, decollate the hydra, whereever this hideous monster penetrates with its various vicious heads into the fystem; whatever mischiefs they are actually doing or liable to do. I fay then, the very fame remedy that will cure a thousand other maladies, will also annihilate the hydatides; and

and that is mercury, accompanied with such other medicines as shall be adapted to the constitution and habit of the patient.

Lastly, as relating to this subject, I shall consider cedematous swellings of the legs. They always befpeak a very bad habit, and frequently are the messengers of death. I shall distinguish these cedematous swellings into two kinds; first, that which is attendant on debilitated leucophlegmatic habits, labouring under obstinate intermittent agues, chlorosis, fcurveys, obstructed menses; &c. fecondly, that which attends hectics, and fuch kind of diforders where the fystem is consumed by an universal acrimony. Whichever way, however, these dedematous fwellings are produced, they are always a metaffafis of the peccant humour, which, by an effort of nature,

is thrown from the system on such parts as are the least able to refist-fince such patients generally at nights have this fivelling to a greater degree than in the morning, particularly when they are not in a cumbent posture. But this we experience not to be an universal rule; for sometimes the legs will begin to be cedematous, even in patients who are constantly confined to their bed; but then, in this case, it indicates a commencing anafarca; or elfe, in the last stage of a confumption, it proves that the end of the patient is nigh at hand.

In leucophlegmatic patients, where the stamina are yet in a tolerable state, the load is far from being difficult to remove; but we must begin with the fystem first. Let us correct the vitiated humours by mercury, and brace up the folids by the bark and chalybeats, as has been mentioned above; which No XV. or N.

N'XVI. will effect; and externally, mercurial plaister applied all round the ancle will effect the rest. Sometimes, however, those ædematous swellings are enormously large; in which case mercurial pediluviums will be of singular service; and, from the following, I have in many cases experienced the wished-for effect:

Nº XXI.

Resp. vin. cum acet. vin. ana cong. i.

Merc. subl. cor. 3 i.

Sal. mart. 3 iii.

M. f. pedil. calid.

In this pediluvium, as warm as the patient can bear it, let the feet be bathed every morning and night. After which the liniment, N°XIX. may be used, and the legs wrapt up in flannel so as to preserve a due perspiration. Women in the decline of life, when the menstrual discharge leaves them, if of gross habits, or

of debilitated constitutions, either by child-bearing, or from other causes, are frequently subject to cedematous swellings in the ancles, and fometimes, what is worfe, to exulcerations. Here a metastasis is evident; and to correct this, and to bring nature in due order again, requires particular attention. Mercurials, both externally and internally, are requifite; and, properly managed, will wholly eradicate the virus in the system. But without mercury I can hardly think it practicable, whatever may be afferted to the contrary.

Oedematous swellings of the ancles in hectic patients, where the skin over the whole furface besides is in a contracted state, so as merely to cover a living skeleton, close to the very form of the bones, is a symptom, indeed, of the last struggle of nature with death. Here hope feems P 2 gradually From

gradually to vanish; yet whilst there is life, we ought not wholly to for-sake the patient. A mercurial plaister applied to the soals of the seet will prove highly serviceable to promote perspiration. I have more than once experienced that this application, together with other remedies, has given a favourable turn to such desperate cases, when all human assistance has been totally despaired of.

To conclude this subject, three things we ought ever to attend to in patients labouring under dropsical extravasations of humours. First, the age, sex, and general habit of the body; secondly, the various accompanying complaints, and in particular those of the respirative, urinary, and perspirative organs; for to the desects of them the disease owes its origin and effect; and thirdly, the principal seat of the ædematous extravalation of the diseased sluid.

From these pathognomonic observations we may form a true diagnostic distinction; and thence our indication of cure; which, if followed according to the plan here laid down, I am perfuaded will not only produce a more speedy, but a more rational and radical cure of fuch kind of difeafes, than upon the common plan; and flatter myself may be the faving of many individuals in the commonwealth.

Leaving this fubject, I shall proceed to treat of a difeaso of the pituitous kind, the most wretched incident to human nature; namely, the morbus pedicularis. This filthy disease affords great speculation in natural philosophy, and seems to be one of the many proofs in the creation, that animalcula may arise de novo from intestine motion in corrupted animal or vegetable substances. We know that every species of ani-P 3 opportunity;

mal

218 OF THE MEDICAL QUALITY mal will generate its own species, every plant will shoot up and pro-duce more of its own kind, either by feed or the branching of its root; but why should nature be confined to this, when ocular demonstration convinces us daily to the contrary. We are told, indeed, that the eggs of all the various species of animalcula float in the air; but if we more closely observe the operations of nature we shall find, that all fuch hypotheses are baseless fabrications of the imagination. How shall we reconcile, on this principle, that we may by art produce a thousand different animalcula and minute vegetables, by the commixture of fuch fluids, as it is wholly out of the road of nature to bring together, which, when separate, produce quite

These matters I shall, however, investigate at some more seasonable opportunity;

different effects?

opportunity; and at prefent obferve relating to the fubject, that animalcula are apt to be generated de novo in the living as well as in the dead animal, internally as well as externally, according to the nature of the fluids, and the change they undergo. The loufy difease is common to all animals; but when we at the same time observe, that those vermin are characteristically as different as the animal they breed upon; there is hardly a doubt left that every distinct species of animal may breed its own vermin from its own corrupted fluids, as well as transplant them in the kindred foil of animals of its own species.

But to come close to the subject in hand, let us begin with a loufy head. The inhabitants of that climate feem not to thrive when they travel beyond their native country; and hence, as by an instinctive rea-P 4 fon,

320 OF THE MEDICAL QUALITY

fon, thefe emigrants are always inclined to return to their own native foil, to enjoy their tranquillity in a sheltered forest, with less peril than in open pastures. The inhabitants of the body, on the contrary, not relishing so sequestered a life as the former, take more delight to live upon the fat of the land, and build their habitations in the garments, without any other dread than difturbances in their tranquillity from that cruel enemy to their species, cleanliness. But there is still a third race, which, from their habitations, one might imagine were exceeding amoroully inclined. This last fort of creeping generation is apt to infest youth of both sexes, about the pudenda, and consequently must become troublesome. Indeed the first class, namely, the head pediculi, are apt to breed in the heads of children, when the hair is become of any tolerable length, especially if they are

of pituitous and bland habits; and more particularly if there be eruptions of the alopecious kind. But grown persons are not exempt from these troublesome companions, tho the whole system will in every other respect enjoy a perfect state of health. The comb, indeed, is a well contrived trap; but, whilft they have cemented their eggs fo numerous about the roots of the hair, it is fometimes hardly possible to clear the head but for a small space of time; after which the eggs will produce a new collection. We may, however, in one night's time, destroy them root and branch, in the following manner:

N. XXII.

Be Pomat. rofar. 3 i. Merc. pracip. rubr. pulv. subtil.31s.

322 OF THE MEDICAL QUALITY

Let this ointment be rubbed all over the head, to the bottom of the skin, at the evening going to bed; then put over a cap, which confine every way, so as to be as close as may be. In the morning the ver-min will be found distributed all over the cap, dead, and black with the mortification; then comb the head diligently for a few days, and the remaining dead vermin, together with the nests killed in their buds, will comb out, and render the hair and head clear of the nuisance. This I have not only recommended with the wished-for effect to children, but to ladies, whose hair, however finely dreffed, hath stood in need of such a discipline on account of their troublesome head-companions; and at the same time have cleared the head of scabs, which frequently attend on fuch occasions. The body pediculi are of a more filthy nature—they often exist in the fame

fame habits that have the former; but they are by no means the absolute confequence, as they are different in their nature. A rofycheeked lad or lass may, indeed, have a loufy head; but when the body is equally loufy, farewel to the bloom of youth and health. It is frequent enough to hear the expression, that such a one has a lousy look, and fometimes the fuspicion is just enough; for a leucophlegmatic habit, especially in sloth and idleness, is the particular object of their pray; and when abundance of pituità is in the case, it is almost out of the power of cleanliness alone to keep the body clear. For I have feen them creep out of the pores of the skin; nay, I have opened biles, that have produced clusters of lice more than corrupted matter, the fight of which has had on me an emetic effect; and I almost hate to write on the nauseating subject. In former ing . times

324 OF THE MEDICAL QUALITY

times this filthy disorder was more known than now ; and we are well informed, that patients, who neither were indigent nor flothful, fell facrifices to it. At present it is more confined to gaols, the camp, the fea, and the miserable part of mankind. Want of cleanliness, I readily grant, will produce it; but the principal cause is in the system itself. For persons in full vigour of health and! activity will not be fo subject to be attacked by them, though near enough to the infected; on account of the alkalescent spirit; ver their blood; and there are some systems; fo powerful, as even to be an antidote to them.

Mercury, however, is their deftructive bane, whatever class they
be of, and wherever they dwell.
Let but a loufy person use mercury
internally, as the medicine N° X.VI.
and externally, let the body, morning

ing and night, be rubbed till it glows with a mercurial cloth (namely, an ounce of mercurial ointment rubbed into an old handkerchief); and the morbus pedicularis will effectually be cured, how obstinate soever, and how incapable foever it may be of being subdued by any other means. By this method I have cured the morbus pedicularis in various degrees; but in particular one wretched patient, whose body was over-spread with ulcers, which the clus-ters of that vermin bred under the skin had produced.

The third kind of pediculi, peculiar to the pudenda, therefore called pediculi inguinales, or, vulgarly, crab-lice, are wholly different from the former two forts, as well in their peculiar shape and nature as the habits they infest; fince they are most peculiar to young people, who otherwise enjoy a good state

ftate of health, and are wholly free from the other kinds; yet they are exceedingly troublesome companions. They are, however, soon destroyed by rubbing some mercurial ointment in and about the parts; as in a little time the whole generation will be cut off.

I shall hope to have said sufficient on this lousy subject; and therefore the reader, I presume, will chearfully acquiesce in my leaving it.

Having thus gone through the various classes of chronic diseases, as far as it appears to me strictly to come under the subject of consideration, I shall conclude this work, in hopes the arguments I have advanced in behalf of the many beneficial virtues of mercury, and of the true investigation of the morbid effects in the animal occonomy, may prove sufficient to lead the judicious practitioner

practitioner into a right method of treating fuch diforders.

But, however, whilst the doctrine is very different from the general established mode of practice, I must again beg leave to caution the unexperienced not to be too sanguine in his expectations; and not fall into the error of supposing, because the sparing use of mercury is of so universal benefit, an increased dose of that great medicine will dispatch the patients complaints so much the sooner.

Chronic distempers, though slow in their progress, are most apt to ingraft themselves into the stamina of the parts that compose the system. The longer the patient has laboured under them, the deeper must the disease have penetrated; and the deeper the malady, the longer time it most certainly will take to eradi328 OF THE MEDICAL, &c.

cate the evil. This fact should at all times prevent rash attempts at speedy cures in long and obstinate cases. Nature, indeed, may sometimes perform wonders, and happily make an universal revolution in every part at once; affift the aiding hand of the physician, and crown his endeavours with speedier success than what he could possibly hope for from his most penetrating judgment. But let such success not make him vain-glorious, and prefume to force nature into the same compliance to his will, which the, of her own accord, pleased to grant. The more powerful our remedies, the more skill is requisite in the application. It is not the medicine, but it is the judgment, the penetrating eye of the medical pilot, that must conduct the patient into the happy harbour of health.



